6 .N4 A1 1892

ANNUAL REPORT

OF THE

Committee on the Department of Water

OF THE

BOARD OF

Street and Water Commissioners

OF THE

CITY OF NEWARK, N. J.,

FOR THE YEAR ENDING

DECEMBER 31st, 1892.

ANNUAL REPORT

OF THE

Committee on the Department of Water

OF THE

JUL 3 1916

BOARD OF

Street and Water Commissioners

OF THE

CITY OF NEWARK,

For the Year ending December 31st, 1892.

OFFICERS AND MEMBERS.

JAMES SMITH, Jr.	President
E. LIVINGSTON PRICE,	Counsel
CHARLES MARSH,	General Superintendent of Works
ENOS RUNYON,	Clerk of the Board

FERDINAND A. HAHN,	*Term expires with 1894*
JAMES SMITH, Jr.,	*Term expires with 1895*
HUGH C. HENDRY, M. D.,	
THOMAS HARLAN,	*Term expires with 1896*
REUBEN TRIER.	

Committee on the Department of Water,

THOMAS HARLAN, Chairman, HUGH C. HENDRY, M. D.,
REUBEN TRIER.

Newark, N. J.:
Grover Brothers, Printers and Stationers,
843 & 845 Broad Street.

1893.

Superintendent's Report.

To the Board of Street and Water Commissioners of the City of Newark, N. J.:

GENTLEMEN :

This report, as the Superintendent's report of the workings of the Water Department for the year 1892, takes a somewhat different form from those of previous years, inasmuch as it does not begin with the stereotyped statements of quantity of water pumped during the year, pounds of coal consumed, etc., etc., because the past year, marks the most important event in the history of Newark's Water Supply. The New Water Supply, the need of which has been felt so long, and the question of procuring, which has been agitated for so many years, has at last become an accomplished fact.

On January 12, of the past year, at 10 A. M., the first water from the Pequannock water-shed was let into the reservoir through the twenty-one miles long, forty-eight inch conduit. The water ran for five and a quarter hours, and about 1,500,000 gallons were let into the reservoir. Since the above date water was let into the reservoir at intervals ; in

January	66,300,000	gallons.
February	105,400,000	"
March	170,300,000	"
April	253,200,000	"

Since April 26, four days before the date stipulated in the contract between the City of Newark and The East Jersey Water Company (May 1st), the supply of the city has been exclusively Pequannock water. Although the

water has been shut off during the year several times in order to make necessary repairs to the conduit, it has on no occasion been for so long a time as to necessitate a return to the old Passaic supply.

On February 15, at 12.49 P. M., the first water was let into the High Service reservoir on South Orange avenue, through the five miles long, 36 inch conduit, which connects the 48 inch conduit with the reservoir. The supply for the regular High Service at this reservoir has, however, been interrupted on several occasions for so long a time as to necessitate pumping at the High Service Pumping Station (on one occasion two weeks, from June 15 to July 1), while the pumping for the special High Service has had to be continued through the entire year, awaiting the notification from the East Jersey Water Company to open the gates connecting that service with the 36 inch conduit.

It would seem appropriate in this report to briefly review the history of Newark's water supply, and to begin with, it is a fact perhaps not generally known that it is one of the oldest in the country. In the last year of the last century, a number of public spirited citizens "associated together" and obtained a charter from the Legislature, (and as stated in the preamble) "for the purpose of supplying themselves and their neighbors with water." The incorporators named in the charter are John N. Cumming, Nathaniel Camp, Jesse Baldwin, and Nathaniel Beach, who are also First Directors; in addition to which are named Stephen Hays, James Hedden, Jabez Parkhurst, David D. Crane, Joseph T. Baldwin, Luther Goble, Aaron Roff, John Burnet and William Halsey. The Act was passed on November 17, 1800, and it is a coincidence worthy of note, that within fifty-four days, one hundred years later, the works of the new water supply from the Pequannock valley will pass into the absolute possession of the City of Newark.

The principal supply of water came from springs and wells located in the old Eighth, Eleventh and Fifteenth wards, on both sides of the Morris Canal. Several of the

wells on the west side of the canal can yet be seen, and when several years ago the Branch Brook pond was nearly emptied, a small water works, consisting of wells, pipes, gates, etc., was laid bare. There were in all seventy-three wells and springs, and the water was collected (partly through a 12 inch pipe under the canal) in a small covered reservoir about 150 feet east of the same, in the line of what is now Seventh avenue. From this reservoir the water was conducted to the old "Needle factory" on Branch Brook, back of what was formerly Fehleisen's brewery. Here the water was pumped from a well into a reservoir about forty feet long, thirty feet wide and fourteen feet deep. This reservoir was called "the reservoir in the quarry." Water power was at first used for pumping, but later steam was substituted. A separate pipe conducted the water from the wells located north of old Bond street, east of First street, and a well, where subsequently the old Lock street school house stood, to a very small reservoir (about 30 feet by 30 feet, and 12 feet deep), on the north side of Orange street, about 130 feet east of Boyden street. This pipe must have been laid before the Morris Canal was built, as it runs under the bed of the same for a distance of over eight hundred feet.

At the Washington factory, east of Factory street, and north of Eighth avenue, and about 100 feet from each, were a small number of springs, and the water was pumped into a tank in the factory. Water power was used up to the end of the sixties, when John Garside, who manufactured cutlery in the lower part of the factory, gave up business, and his engine was substituted for the old wheel, which, before lifting water for Newark's early water supply, is said to have been one of the paddles of the "Robert Fulton," the first steamboat run on the Hudson river in 1807. *

The Branch Brook furnished the water-power for both the needle and Washington factories, and also for the lower

* It would however seem more probable that the wheel in question was either the stern-wheel, or one of the paddles of two vessels built on the Passaic River at Belleville, considerably before Fulton's time, and propelled by steam for experimenting on the Passaic River.

mills belonging to the company, the Franklin and Clay street factories. There were three mill-ponds at the time (now all filled in and built upon), one above each of the three lower mills. Adjoining the collecting reservoir, near the canal, was a pond called the "upper pond," from which the water was taken for the needle and the other factories when run by water-power. In times of drought, this pond was replenished from the Morris Canal by opening the blow-off gate near Dickerson street, from where the water ran through the then existing small brook to the pond.

On the north side of Springfield and South Orange avenues, on what became later the Aschenbach property, there was another reservoir. It was one hundred and six feet long and thirty-eight feet wide, and collected water from springs in the locality. The distributing pipe ran through the Rankin property, and crossing High street ran under the buildings now standing on the east side of High street, and the south side of Market street, from where it continued down the latter street.

The earliest distributing pipes used were of wood, subsequently replaced by iron, and in some instances by cement pipes. The largest pipe was 10 inches, and the smallest even below one (1) inch.

Inasmuch as there are no records of the old Aqueduct Company at hand, it is impossible to tell how the works developed from the first beginning in 1800 to the condition described above at the time of their transfer to the city.

On the 26th of February, 1838, the Legislature passed a supplement to the City Charter (Newark was incorporated a city in 1836), empowering the city to raise money for a water supply, but the Aqueduct Company had a proviso inserted making it obligatory upon the Mayor and Common Council, before executing any work, to purchase the stock, works, powers and privileges of the Company. Whatever action was taken by the city authorities after the passing of this act, it must have been without result, because, on December 9th, 1845, the Mayor and Common Council of the City of Newark entered into a contract with

the Aqueduct Company for the furnishing of a full and sufficient supply of water "for the extinguishment of fires and for washing, working, cleaning, and trying the fire engines, hose and other apparatus used, and to be used, for the extinguishment of fires only." In this contract the city agrees to lay iron pipes in a number of streets: a 10 inch pipe in Broad street, from Orange street to Market street, the smaller pipes in Broad street, from Market street to Chestnut, in Smith (now Park street), part of Mulberry street, Centre street, in Park place, in Washington street, from Broad to Market streets, and also in Market street from the Court House to Broad street (10-inch) The city also agrees to pay the cost of the 10 inch pipe already laid, extending from "the reservoir in the Quarry" through Quarry and Broad streets to Orange street. All the above mentioned pipes shall be the property of the city, but the Company shall have the privilege of tapping them for services to supply their customers—with the exception of the pipe in Broad street, from Orange to Court streets, and in Market street, from the Court House to Broad street, which shall only be used as feeders to supply their own parallel distributing pipes through connecting branches. The city further agrees to keep in good repair all hydrants and cisterns, and to provide against all unnecessary waste, and to see that the hydrants are closed after each conflagration.

Besides furnishing the water as above mentioned, the Aqueduct Company on their part give the city the right and privilege in the future to make connections for hydrants, cisterns, and other apparatus for the extinguishment of fires, with any of the above mentioned pipes, or any pipes belonging to the Company. The Company also agrees to maintain and keep in good repair all water pipes and reservoirs, and that they will at all times, except when repairing or rebuilding, keep 80,000 gallons of water in the same. Also, the authorized agents and officers of the city may, at reasonable hours, and upon application to the Superintendent of the Company, enter, view, and inspect

the reservoirs, to search and observe the condition of the same, and the quantity and supply of water. In case the Mayor and Common Council should be of the opinion that the supply is not adequate, they may appoint "four judicious and disinterested freeholders, one from each ward, as Commissioners to inquire into the same," and the President and Directors of the Company may, if they see fit, appoint a like number in the same manner, and upon application, the Chancellor or any one of the Justices of the Supreme Court shall appoint some disinterested freeholder another Commissioner, and if a majority of the Commissioners shall be of the opinion that the supply is inadequate, and upon the failure of the Company to furnish an adequate supply, the same shall be debarred and prevented from using any of the pipes belonging to the city.

These are the main features of what is the first water contract the city ever entered into ; it is signed by William Wright, President, and Jesse Baldwin, Mayor. The Legislature by an Act approved February 24, 1846, validated this and a supplemental contract relating to the laying of certain lines of pipes.

At a meeting of the Common Council held on April 9, 1855, the following resolution was passed :

"WHEREAS, Owing to the want of an adequate supply of water in every part of our city, for domestic, mechanical and other purposes, and the entire destitution of the outer sections of the city of such supply, and the evident incompetency of the present Aqueduct Company to furnish such supply ; therefore,

Resolved, That a Special Committee be appointed to examine into the subject and report upon the best means of obtaining such supply of water as shall be entirely adequate to the wants of every portion of the city, and as will be sufficient for any emergency."

A Committee was appointed, of which Alderman Layton was Chairman, but it had not concluded its labors at the expiration of the term of the Council on Dec. 28, 1855. At the first meeting of the incoming Council the following resolution was passed :

"*Resolved*, That the report of the Special Committee of the last Council, on the subject of a supply of water for the city, which was presented and laid on the table, on the 28th day of December last, be taken from the table, and be referred to a Special Committee, together with the documents accompanying the same; and, also, so much of the message of his Honor, the Mayor, as refers to the same subject."

The new Committee consisted of Daniel Dodd, S. A Baldwin, D. W. Baldwin, E. C. Aber and Richmond Ward.

The report of the Committee was presented on Sept. 6th, 1856, and is very exhaustive, but of too great length to be here reproduced. The following is a brief *resume* of the same, which gives an idea of the state of the water supply question at that time. The report relates how the solution of the problem of procuring the full supply of water for all portions of the city, looking as well to its future growth as to its present wants, had received the attention of every Common Council since the incorporation of the city, but that all official acts and reports on the subject so far had been intended only to answer a temporary purpose, to remain only until the growth and finances of the city should warrant the adoption of a plan that would be "permanent in its character, and as expansive in its means of supply as the city itself."

As to the sources of supply from which the water could be obtained, the Committee considers that there exist fatal objections at the outset to all except two. On Second river are the valuable mill-sites, which make the river impracticable. The rights of the Society for the Establishment of Useful Manufactures are the obstacles to the Passaic river at Little Falls or Paterson, and the rights of the Morris Canal to Lake Hopatcong, in addition to the great distance of this Lake, as well as Budd's Lake, from the city.

The two remaining sources which the Committee think worthy of consideration are, first, the then existing supply furnished by the Aqueduct Company, and second, the Passaic river below Paterson. As to the former, the Com-

mittee had frequent consultations with the committee of the Company, and made careful examinations of their affairs, works, rights, franchises, etc., their power to supply the present wants, and to what extent the capacity of the works could be increased. Proposals of sale to the city were also made by the Committee. Particular attention was given to the nature of the relations between the Company and the city, with regard to existing contracts of long standing; and as the Company and its friends claimed that it could supply the city as fully and more economically than any other plan that could be devised, also to the reliability of the Company for the present and future supply.

The Committee engaged the services of Dr. Wm. Kitchell, then the State Geologist, who, with the consent of the Aqueduct Company, examined all their springs, wells, reservoirs and works, and measured the water flowing from the different sources (the springs and wells). In his report to the Committee the Doctor states that he has come to the conclusion that their yield may safely be estimated at 1,400 gallons per minute, or a little over 2,000,000 gallons in twenty-four hours, which quantity, however, might be increased to 3,000,000 gallons, by a better arrangement of the works, by opening new springs, and by deepening and increasing the number of wells.

This maximum supply of only 3,000,000 gallons per day, or 60 gallons per capita for 50,000 inhabitants (this being the population of the city at that time), the expense of extensions and repairs to the works, in addition to the purchase money for the same (the price fixed by the Company was $230,000), together with the impossibility of reaching the higher portions of the city, appeared to the Committee almost insurmountable obstacles.

The report then takes up the matter of existing contracts between the city and the Aqueduct Company, of which there were but two, the contract of Dec. 9, 1845, and the supplemental contract of the same year, which were all the documents defining the mutual relations and reliabilities of the parties, while the supplement to the City Charter pass-

ed on Feb. 28, 1838, which recognizes the power of the city to raise money for a water supply, but makes it obligatory upon the city to buy the work, etc., of the Company, cannot in any sense be considered in the nature of an agreement between contracting parties, as it imposes no restrictions which might not have been legally disregarded by the Legislature in their next Legislative act, and therefore the city could not be considered forever debarred from obtaining its own water-works without first coming to terms with the Aqueduct Company.

The only remaining source of supply, the Passaic river below Paterson, had been recommended by engineers, and the fact that Jersey City had erected its works upon the river, enabled the Committee to arrive at results which otherwise would have been problematical; and the committee further expressed itself as strongly impressed with the conviction that the further the inquiry into this source was pushed, the more strongly it would appear that the time had arrived for proceeding in the prosecution of this great work.

As to the probable cost of the work, the report states that an engineer of great skill and experience, and fully acquainted with the location and necessities of the city, had proposed to erect an engine house with the necessary engines, pumps, and two sets of machinery, and to furnish a supply within the city limits of 10,000,000 gallons in twenty-four hours, at an elevation of 225 feet, for the sum of $250,000 (exclusive of lands), to be paid only upon the completion and successful operation of the works.

Finally the Committee recommends the adoption of the following resolution :

Resolved, That the Special Committee on a Supply of Water be directed to continue their investigations, and to take the requisite steps for an early application to the next Legislature for the necessary power and authority to procure such a supply of water as we need, and that they prepare and report to this body the draft of a bill for that purpose.

September 5th, 1856.

The Aqueduct Company, however, did not give up the fight, because a supplement to the original Act of 1800 was passed by the Legislature, and approved February 17, 1857, authorizing the Newark Aqueduct Company to enter upon lands in search of water, and to make use of any other springs or sources of water as they may think necessary, to afford a further supply of water to the City of Newark, and to extend aqueducts in the vicinity of Newark. What action the Company took under this act cannot now be ascertained. Probably surveys, etc., were made, but no important additions to the works were made up to the time of the passing of the act creating the Newark Aqueduct Board. This act was approved March 20, 1860, and authorized the Mayor and Common Council to purchase the property of the Newark Aqueduct Company, including all their rights, franchises, lands and property, real and personal, for the sum of $150,000.

The first members of the Aqueduct Board were William S. Faitoute, Daniel Dodd, Thomas R. Williams, Edward Doughty, Jacob Van Arsdale, Henry G. Darcy and Mayor Moses Bigelow, *ex-officio*. The conveyance of the real estate consisted of eighteen tracts, including the Branch Brook, the Spring lots, the Mill properties along the "Mill Brook," several smaller tracts, and the reservoir lot at Springfield and South Orange avenues.

There were at the time of the transfer about 95,000 feet of pipe of all sizes from 10 inches down, connected with the works, of which the city had laid (under the previously mentioned contract) and owned, about 18,000 feet.

The Newark Aqueduct Board organized and held its first meeting in the office of the Newark Gas Light Company, on March 29, 1860. Mayor Moses Bigelow was elected President, and Jacob Van Arsdale, Secretary. Later the meetings were held in the Library building, and in July the Board rented the second floor of the Mechanics' Bank building on Broad street, where the office remained until December 24, 1878, when it was removed to Halsey street, its present quarters.

In May, 1860, Mr. N. N. Pollard, was appointed agent of the Board (and subsequently Superintendent), to look after the interests of the Board, as Mr. George T. Baldwin, who had been the Superintendent of the Company, had declined the position.

In June, Mr. George H. Bailey, of Jersey City, was appointed Engineer of the Board, and was directed to prepare plans, and report on increasing the supply from the wells, and later was instructed to prepare plans for a new water supply on an extensive scale. Mr. Bailey presented his report on January 31, 1861, and it was ordered printed.

There are but few copies of the report now in existence, and I will therefore briefly state some of the main features of the same.

The report considers the requirements for the city for thirty (30) years up to 1890, and the consumption in that year is estimated at 14,580,000 gallons daily for 243,000 inhabitants, or sixty (60) gallons per inhabitant *

Of the different sources of supply, the springs furnishing the water at the time are first considered and found inadequate, inasmuch as the yield (less than 1,000,000 gallons per day) could scarcely be increased, as they were more or less affected by summer droughts, some even failing entirely.

The Rahway river is also considered inadequate on account of the small drainage area.

The great expenditure, amounting to several million dollars, which would be incurred to obtain a supply from either Lake Hopatcong, Green Pond, the Rockaway River or Long Pond (Greenwood Lake), was deemed a sufficient reason to make further examination unnecessary

First and Second rivers, separate or combined, are next considered ; they were gauged, but the yield found insufficient for a permanent supply. Furthermore, the rights of

* In Croes & Howell's report, made nearly twenty years later, the consumption in 1890 is estimated at 17,446,000 gallons for 269,000 inhabitants in an assumed Newark water district, including all the parts of Essex County east of the Orange mountain (65 gallons per inhabitant).

the different mill owners would have had to be purchased or condemned, separate pumping for each river would have been required, and the water of Second river was even then of an exceedingly turbid appearance.

The Morris Canal is next taken up, and the quality of the water (upon analysis) being found unobjectionable for domestic purposes, Mr. Bailey was authorized by the Board to communicate with the Morris Canal Company respecting a supply from the canal, and the cost thereof In his letter to the Canal Company Mr. Bailey states that it is proposed to take the water from either the Bloomfield or Newark levels ; in one case at an elevation of 170 feet, and in the other of 106 feet, above tide. The whole supply of the city is proposed to be taken from this source, and the quantity is to begin with 2,000,000 gallons per day, to be increased to 5,000,000 gallons in two years ; to 10,000,000 gallons at the close of ten or fifteen years, and doubled again at the end of a corresponding period. Mr. Bailey further states that it is understood that the necessary quantity of water can be afforded by the canal, and in such case he requests the attention of the Company to the following inquiry :

"Upon what terms will the Canal Company agree to furnish the city with a supply of water amounting to seventy (70) gallons per day for each individual of its population, and continue the same for a period of not less than fifty years ; the water to be taken from the canal at either of the before-mentioned places, or a portion from each ? The supply to be guaranteed and equal in quality to that now in the canal. All work necessary for drawing the water from the canal and conducting it to the city, including a settling reservoir of large extent, to be constructed, by the Aqueduct Board."

In his reply, dated January 16, 1861, Mr. E. Marsh, President of the Company, states that upon investigation they have arrived at the conclusion that the sources in possession of the Company, and the improvements contemplated, will abundantly provide the largest quantity named.

That it is proposed to obtain the supply principally from Greenwood Lake, and that the Company in addition owns Green Pond, which is not required at present, but can be made available at any time. The engineer of the Company estimates that there will have to be expended in order to provide and deliver in proper condition the amount of water about $100,000 the first year, and $50,000 per year for the succeeding four years, which sum shall be paid by the City of Newark. The charges for the water are to be $12,000 per annum for the first 2,000,000 gallons daily, and one cent for every additional thousand gallons. It is contemplated to deliver the water into two reservoirs in the city ; the main one at a level of 106 feet, and the other at about 220 feet, above tide, the water to be delivered into the latter to be not more than one-fifth of the total, and the city to pay for all the necessary fixtures and piping.

The Company subsequently modified its original proposition as follows: to deliver the water from Bloomfield on the payment of $100,000 the first year, and $50,000 the succeeding two years ; $10,000 per annum, for the first 2,000,000 gallons daily, and one-half cent for each additional 1,000 gallons. *

The last of the available sources considered is the Passaic river. The quality of the water according to analysis by Prof. Horsford, of Yale, and Dr. Chilton, of New York, was found equal to that of most rivers, excelling in purity many of good repute, and which, furthermore, could be improved by natural filtration or settling.

A favorable location for a filtering and settling basin was found in the low ground extending about one-half mile along the river above Belleville. Three lines for conducting the water to the city were surveyed and estimated. The first line contemplates a conduit from the filtering basin to a pumping station below Belleville, and pumping

* This proposition of the Morris Canal Company is now of special interest in view, of the fact that the new supply of the City of Newark is virtually that of the Company, through the Lehigh Valley R. R. and the East Jersey Water Companies.

directly into the Low Service reservoir. The second, the location of the pumping station at the basin, and pumping into the receiving reservoir on the high ground west of Belleville, and from there by gravity to the Low Service reservoir. The third line coincides with the first in respect to the location of the pumping station, and contemplates a receiving reservoir on the high ground on Bloomfield avenue, near the city boundary.

The plan recommended in the report of supplying the city from the river, and the estimates of the cost of the work are in accordance with the first proposed line—it being the least costly. For the comparison of the proposition of the Morris Canal Company, the following is the estimate covering that part of the work necessary to deliver the water into the Low Service reservoir:

Filtering and settling reservoir and work at the river	$ 18,072.00
For 7,028 ft. Conduit	43 468.00
Engine House and Pump Well	17,146.70
Two Pumping Engines and Boilers	60,000.00
For 14.700 ft. Low Service Pump Main	134.300.00
Total	$272,986.70

A comparative statement of the annual expenditure of furnishing the water from the Passaic river, including maintenance and interest on the above amount, with future extensions up to twenty million gallons, and the Morris Canal is in favor of the former project. The following is the estimate of the cost of the work in the city:

Low Service Reservoir	$ 56,049.47
High Service Engine and House	26,000.00
High Service Pump Main	22.800.00
High Service Reservoir	18,371.00
City Distribution (Cast Iron Pipe)	304,679.00
Total	$427.899.47

The cost of maintenance of a supply of 5,000,000 gallons daily is estimated as follows:

Interest on cost of Works—$770,975.47 at 6%	$46,258.53
Cost of Raising 5 000,000 Gallons per day	16,982.00
Superintending, collecting, repairs &c	15.000.00
Total	$78,240.53

The number of buildings supplied with water in 1860 was 1,636, of which 1,371 were dwellings, and 565 for purposes other than domestic. The income from the works for the year was, for dwelling and manufacturing purposes, $15,338.46, and for street sprinkling, $1,160,53; total, $17,-498.99. The whole number of buildings occupied as dwellings in the city was 10,212, and buildings occupied and used for other purposes, 1,554; total, 11,766. The income of the Board at the time of the 5,000,000 gallons consumption was estimated at $91,250.00, or, on the assumption that a proportion of one-sixth of the city was receiving a supply, the income from the whole city, if the same scale of charges were adhered to, would be $99.030.76.

Further legislation was deemed necessary to enable the Board to proceed with the work, and on March 8, 1861, the Legislature passed the act requiring the Board "to devise a plan commensurate with the present and future wants of the city" for a supply of water by enlarging the works already erected, or by erecting new works, or both, and to report to the Common Council for their approval or rejection.

On July 9, of the same year, the Board adopted Plan 1, as designated in Mr. Bailey's report, and appointed a committee to present the same to the Common Council at their next meeting, and on October 1st the Board received a communication from the Common Council announcing their approval.

The matter of a new supply had advanced thus far when the breaking out of the civil war, with the consequent instability of all financial and commercial affairs, and the great advance in prices of labor and materials caused the construction of the new works to be deferred, and the Board proceeded with such extensions and improvements of the old works only as were imperatively necessary. Some of the wells were deepened and enlarged, in order, if possible, to increase their yield. No very considerable increase, however, was obtained in that way. In 1862 a new reservoir was built, by cleaning out the old pond adjoining the

covered reservoir east of the canal, and raising and strengthening the banks. This reservoir was abandoned early in the '70's, when the present Low Service reservoir was built. In 1865 a second reservoir was built adjoining the first, which was known for years as the old Branch Brook reservoir, and was in service until July, 1888. The capacity of both reservoirs was about 12,000,000 gallons, and the elevation 87 feet above tide, and rendered available the whole supply of the springs, as well as such other sources as were then at hand (the Morris Canal). The old reservoirs on Orange street and South Orange avenue were abandoned as useless—the former reverting to its original owner, and the latter was sold to Mr. William M. Aschenbach.

Extensions of street mains were also made, from time to time, as the demands for water required, and in place of the original ten-inch main from the reservoir, a twenty-four inch main was laid to the corner of Quarry and Broad streets.

In April, 1865, the Morris Canal Company offered to supply the city with 300,000 gallons of water per week for the sum of $500 (about $128.00 per million gallons), and in October the Canal Company entered into contract with the city for a supply for five years from July 1, 1865, but whether at the above price is not stated in the minutes of the Board. In 1869 this contract was renewed for the current year, the Aqueduct Board to pay $1,500 for all the water needed in addition to the springs.

In April, 1866, the Board resolved to proceed with the erection of works to procure a supply of water from the Passaic river above Belleville, upon the general plan adopted by the Board, with such changes as might be deemed necessary, and during the following summer experiments and examinations were made on the low ground above Belleville.

In the spring of 1867, the property was purchased on which the river works (which have supplied the city until the past year) were erected, and on May 8th the contract for

the building of the basins and river-wall was awarded to Messrs. Sandford & Backus, who soon after commenced operations. On September 12th the contract for building the engine house was awarded to D. W. Crane & Co., and on the same date the contract for the first pumping engine was entered into with H. R. Worthington & Co., of New York.

In June the property for the Receiving reservoir was purchased, and on October 28th the contract for building the same was awarded to Messrs. O'Connor, Brady & McGrath, who, however, did not commence operations until the following spring.

The 30 inch pump-main from the pumping station to the Receiving reservoir, and the 24 inch supply-main were laid, and the entire works were completed in the latter part of 1869, and in 1870 were in full operation.

Since 1870 the annual reports of the Aqueduct Board have been ordered printed, and they continue the history of the works from that time up to the present.

The Belleville Pumping Station.

The appended statement of the work of the pumping engine at Belleville shows the quantity of water pumped during the first four months of the year, in addition to that furnished by The East Jersey Water Company. The pumping of the remaining eight months is only such as was necessary to keep the pumps in good working order. Each of the four pumps is started about once every four weeks, but for no longer a time than to fill the pump main as far as the reservoir, when the pump is stopped and the main emptied by opening the blow-off and letting the water run back into the basin.

The pumps are in good condition, and have needed but little repairing; and all the boilers have been cleaned. The fires under three of them are kept constantly banked, so that the pumps can be started at short notice in case of an accident to the new water supply.

The High Service Pumping Station.

The pumps and boilers at the High Service Pumping Station are in good condition, and have needed very little repairing. The appended pumping statement shows the work done by the engines.

Pump Mains and Supply Mains Nos. 1 and 2.

None of the four mains have needed any repairs during the past year. Pump-main No. 1 is used as over-flow pipe from the gate-house of the new water supply at the Receiving reservoir, while No. 2 is kept full by partly opening a gate connecting with the reservoir, in order to supply several consumers along the line, and also the engineer's and firemen's dwellings at the pumping station.

The Receiving Reservoir, Belleville.

Under this heading nothing need be said except to reiterate what has been stated in all former reports, that the reservoir has kept up its good record, and remains in its usual good condition.

The Low Service Reservoir.

The leak on the west side of the reservoir mentioned in last year's report, has been repaired. The reservoir was emptied in the spring, and the Low Service was fed for the time through the pipe laid in 1890, connecting the supply main No. 2 with the distributing main No. 2. It was found impossible to locate the leak on the inside of the reservoir. An excavation was therefore made into the bank on the outside, following up the leak to near the centre of the bank, where a concrete wall was built cutting off the leak. The remainder of the excavation was puddled.

The reservoir has been filled to a depth of 16 to 17 feet since refilling, but the leak has not reappeared.

The High Service Reservoir.

Nothing has been done to the lower outlet pipe at this reservoir, which was found clogged, as stated in last year's report. It is a matter that should be attended to as soon as possible.

Distribution.

There have been laid in in the city during the past year 26,435 lineal feet, or $5\frac{35}{5280}$ miles of distributing pipes. Of these, 250 feet were 20 inch; 245 feet 12 inch, and 25,940 feet 6 inch pipe, and in Belleville 1,739 feet 6 inch, and 977 feet 4 inch pipe. The total length of pipe connected with the works is $197\frac{4127}{5280}$ miles.

In several streets that have been paved with asphalt pavement during the year, the old smaller pipes (vertically cast) have been taken up and relaid with 6 inch pipe, in all 6,221 lineal feet.

The number of hydrants set during the year was 56, of which 19 on the Low Service, 34 on the High Service, and 3 in the village of Belleville. The total number of hydrants connected with the work on December 31, 1892, was 1,649, of which 822 on the Low Service, 798 on the High Service, 26 in Belleville village, and 3 at the Belleville pumping station.

The following streets have been changed from the Belleville level to the High Service: Sheffield street, from Sussex avenue to the north side of Nassau street; Boyden street, from Sussex avenue to south of Eighth avenue; Summit street, from Sussex avenue to the south side of James street; James street, from the east side of Boyden street to the west side of Sheffield street; Orange street, from the east side of Boyden street to the west side of Sheffield street, and Nassau street, from the east side of Boyden street to the dead-end west of Sheffield street.

There have been no serious breaks on the distributing system during the year.

Consumption.

The number of new taps made during the year was 1,448 (294 less than the previous year), of which number 608 were on the Low Service, and 840 on the High Service. The total number of taps at the end of the year was 26,455, of which 11,071 on the High Service and 15,384 on the Low Service.

It is not possible to present the usual consumption statistics for the past year. When the East Jersey Water Company shall have completed and permanently established their system for measuring the water furnished for both Low and High Services, these statistics will be resumed.

The new rule enforced by the Board during the year, that all the water used for running motors shall be metered, caused a great deal of dissatisfaction during the past summer, but the rule had become imperatively necessary on account of the enormous waste of water, which would have brought the consumption during the past summer months up to 27,500,000 gallons per day, which is the limit of our supply up to the year 1900. Several consumers had meters set, but soon had to cease using their motors on account of the great expense of from $1.00 to $4.50 per day (the rate in previous years was $25.00 to $35.00 per season). The meter measurements were found correct by actual measurements of the volume of water passing. Inquiries were made at over one hundred water works in the United States and Canada regarding the use of motors, and it was found that on 79 works all water for motors had to be metered, on 12 works no motors are permitted at all, and on the remainder the motors are assessed—in some cases as high as from $100 to $150 per year.

Real Estate.

There have been no real estate sales during the year.

Storage Reservoir.

The Board has purchased $80\frac{64}{100}$ acres of land on the Irv-

ington road, in South Orange, for the purpose of building a large storage reservoir. The elevation of this reservoir will be about 276 feet above tide in Newark bay. Preliminary surveys are now in progress.

The New Water Supply.

The following reports of the Engineers, Messrs. A. Fteley and Chas. E. A. Jacobsen, were presented to the Board on February 13th and July 28th, 1892, respectively:

To the Board of Street and Water Commissioners, Newark, N. J.

GENTLEMEN:—

In accordance with the resolution adopted by your Board on November 18, 1891:

"That the Consulting Engineer, Mr. Fteley, and Engineer Jacobsen be requested to take up the contract between The East Jersey Water Company and the City of Newark, *seriatim*, and to report to this Board in writing what is still necessary for The East Jersey Water Company to do to complete and carry out the contract."

We beg to submit the following statement:

Our report necessarily contains a number of subjects in regard to which we have already communicated officially or otherwise with you at different times, but we have endeavored to present here in a condensed and connected form the result of our examination of the work performed by The East Jersey Water Company.

The work agreed to be done by the Company is described in various parts of the contract, but it is mainly outlined in the first clause of Section 4, as follows:

"Sec. 4. The party of the second part further covenants and agrees to and with the party of the third part to erect, construct and build in a thorough and workmanlike manner all such dams, reservoirs and works as may be necessary to hold, impound, maintain and deliver the water so to be delivered to the party of the third part, making all necessary erections and constructions therefor, so that the water of

the quality aforesaid and of the quantity aforesaid, may at all times be delivered through the conduit or conduits so to be constructed as aforesaid, and that so much water shall be held, impounded, maintained, and made deliverable at and above the point or points of intake, as they may be hereafter fixed and located, as shall be necessary to furnish through the said conduit or conduits to the said city at the points of delivery therein during each and every day of the year, for all time, the maximum quantity of water above mentioned, and that all the said reservoirs shall be constructed at points in the valleys of the Pequannock or of the Wynockie, or of the Ramapo, at which the water to be retained in them and to be delivered therefrom has not been made unwholesome, or made impure by any matter or substance coming or arising from preventable sources of pollution; and that such dams and reservoirs shall be constructed and built in accordance with the specifications and requirements of this contract."

Inasmuch, however, as the conduit is now being tested and prepared for service by The East Jersey Water Company, we have thought proper to defer reporting on the same until such time as the results of the tests will enable us to gain a more complete knowledge of its condition.

Of the three valleys or water-sheds mentioned in the contract, The East Jersey Water Company has selected that of the Pequannock river.

This river has its sources in the highest parts of the New Jersey highlands; its water-shed, especially above the point of intake, is very sparsely inhabited, and by far the greatest percentage of the area is covered by forests; it is substantially free from objectionable drainage, and the water to be delivered therefrom, in this respect, well complies in point of purity with the requirements of the contract as to the quality of the water to be supplied.

The water-shed above the point where the water is taken into the conduit, covers about sixty-seven (67) square miles.

Three dams have been built: One at Oak Ridge, on the

Pequannock river, forming a reservoir containing 2,500,000,000 gallons, which receives the drainage of about twenty-seven (27) square miles ; one at Clinton, on the tributary of the Pequannock, called Moseman's Brook, forming a reservoir containing 3,500,000,000 gallons, which receives the drainage of about ten (10) square miles. The third dam below the outlet of Echo Lake, called the Macopin Intake, is built on the Pequannock, at the lowest point of the utilized portion of the water-shed.

The reservoirs formed by the first two dams store a very large proportion of the water furnished by the corresponding drainage grounds. The reservoir at the Macopin Intake has sufficient proportions for the purpose of holding water at the head of the pipe conduit, but it has no practical value as a storage reservoir ; consequently, the lower part of the water-shed, about thirty (30) square miles, from the two upper dams to the Macopin Intake, can be utilized only to the extent of its natural daily drainage, and a very large proportion of the freshets will be wasted over the spillway of the dam.

Water-sheds have their local peculiarities, and a strictly accurate estimate of their capabilities could be made only by a series of continuous gauging of the streams which receive their drainage, but in each case, in the absence of such gaugings, comparison can be made with other water-sheds not far distant and presenting somewhat similar conditions, with results which can give a fair idea of the capacity of the drainage area under consideration.

The drainage area above Oak Ridge is capable of furnishing more water than can be stored in the reservoir, but the Clinton reservoir has a small water-shed as compared with its capacity.

In view of good practice, and in accordance with the terms of the contract, our judgment of the capabilities of the system adopted must be based on its probable yield in such dry periods as have been experienced within our knowledge in similar circumstances, and we are of the opinion that the portion of the water-shed of the Pequan-

nock included in the present system of work, with the reservoir now built, although ample for the supply of 27,500,000 gallons now required for Newark, could not in a dry period furnish a maximum daily supply for each and every day in the year, of 50,000,000 gallons, and from our present knowledge of the Pequannock water-shed, we further believe that the capacity of the present system in a time of drought could not exceed 35,000,000 gallons for each and every day in the year.

Closely connected with the subject just mentioned is the question of the diversion of water referred to in the contract. We notice that several branches have been provided along the pipe-line; we are also informed that water is to provided for the running of mills located on the Pequannock below the Macopin Intake. If connections are to be made with the branches mentioned, or if water is to be furnished for the purposes aforesaid, it is plain that in a time of drought during the period that the Company is empowered by the contract to divert water for its own purposes, the margin between the capacity of the present system and the volume of water due the City of Newark would be dangerously small.

The two storage dams are built on a common plan. They are formed of a heavy earth embankment, containing in its centre a wall made of concrete. An ample spillway and a gate-chamber for the distribution of the water are also built in connection with each.

The foundation of the centre wall has been, with two exceptions, extended to the solid rock, reaching at places considerable depth. The centre wall is of sufficient thickness, and is made of concrete of good quality. The earth, on each side of the wall, has been laid in thin layers, well compacted, and the embankments are protected by stone rip-rap.

The dams proper, are, on the whole, substantially built, and the execution of the work has apparently been of a satisfactory character.

No gate-houses have been built over the gate-chambers

at Oak Ridge and Clinton dams. In general practice such structures are always built, especially in locations as much exposed to the weather as these are. They are, moreover, required by the terms of the contract, and should be erected. The contract provides that "All parts of the work exposed to the eye should be of neat and workmanlike appearance without any unnecessary ornamentation, and shall be of a thorough, proper, workmanlike construction, sound, solid and sufficient." Parts of the work, which are exposed to the eye, do not comply with these requirements of the contract; a considerable proportion of the pointing, especially at the spillway of Clinton dam, has yielded to the action of the frost, and the top surface of the masonry of the gate-chambers and of their surrounding walls, which have been finished with a layer of cement mortar, already shows disintegration. These surfaces should be protected by copings.

The crest of the spillway at Oak Ridge is formed of concrete only, and should be protected with a capping of stone.

Each gate-chamber is provided with four pipes built in the masonry, with as many gates in the dry chambers with flap-valves protected by an iron rack; although the valves are operated by appliances placed in the dry chamber, they are out of reach, and, notwithstanding the fact that the number of pipes secure to a large extent the continuous efficiency of the service, these flap-valves, owing to the heavy pressure to which they may be subjected, are liable to become uncontrolable, and could not be properly reached except at low water in the reservoirs. This is a matter that should be remedied.

The drainage of the gate-chamber at Oak Ridge is faulty, and must be corrected.

Since the reservoirs have begun to fill up, and the dams have been subjected to water pressure, small flows of water have appeared at different points along outside of the embankments, also through the rock near the gate-chambers, and through the masonry, wall of the Oak Ridge gate-chamber. While there are at present no indications that

these leaks are of a serious nature, they will, however, be kept under constant and careful observation, the result of which will enable us to determine their extent and character.

We have also observed that the surface of the outer slopes at Oak Ridge have become somewhat disturbed. These irregularities should be remedied, and we think that sodding should be used, especially on the outer berm, with proper drainage arrangements to protect the parts affected by the action of the water.

The reservoir sites, including the specified space around the flow line or high water contour, has been well cleared and grubbed of all stumps, underbrush and shrubbery, and the several areas which formed the wooded parts of the sites have been carefully cleared and raked, and all the stumps and other refuse were stacked and burned in accordance with the specifications. In regard to the smaller vegetation, but little effort has been made to remove it.

The lower areas were flooded, leaving all the rank vegetation in it natural state. On the slopes and higher areas the grass was burned in spots, where it was sufficiently dry to permit of it, leaving the stalks of the weeds standing.

Some refuse and objectionable rubbish around the sites of the old dwellings and barns has not been removed in accordance with the requirements of the contract.

Your Board is aware of these facts, and also of the failure of The East Jersey Water Company to strictly comply with the requirements of the contract regarding the "clearing," notwithstanding the several communications of your Board calling attention to the matter. It is obvious that the work cannot now be done without emptying the reservoirs.

The appearance of a part of the grounds near the dams, especially where extensive excavations have taken place, is not neat and workmanlike, and no attempt has been made to form regular slopes and to protect the same. This matter should be attended to.

The clause of the contract requiring the treatment of shallow flowage has been entirely ignored. Within the terms of the specifications, a large extent of the natural

slopes can be left in their present condition, but at a number of places, especially on large areas of swamp extending along the streams running directly into the reservoirs and on extensive shoals and high grounds, the surface of which is close to high water mark, excavations should take place, with proper slopes in order to comply with the requirements of the contract

The necessary excavating can be done in summer time when the level of the water in the reservoir is low enough to permit of it.

We shall refer, in the report on the conduit, to the dam and gate-house at the Intake.

In submitting this report we beg to call your attention to the fact that inasmuch as parts of the work herein referred to are not completed as specified in the contract, and that further testing may possibly develop deficiencies which at present are not apparent, we are not able to present this as a final opinion.

In conclusion, we desire to state that we have no means of ascertaining the land and water rights acquired by The East Jersey Water Company, and that we have assumed that they are such as to comply with the agreement.

Respectfully submitted,

(Signed), A. FTELEY,
Consulting Engineer.

CHAS. E. A. JACOBSEN,
Civil Engineer.

Dated, February 13th, 1892.

NEW YORK, July 22, 1892.

TO JAMES SMITH, JR., *President Street and Water Commissioners;* COL. E. L. PRICE, *Counsel for Street and Water Commissioners;* W. B. GUILD, JR., *City Counsel;* JOSEPH COULT, *Counsel.*

GENTLEMEN:—

In answer to your request, we have to report that, in the present condition of the work the City of

Newark should be amply secured for the complete performance of the contract, in the sum of $2,300,000, exclusive of water rights in regard to which we have not sufficient data to form a reliable opinion.

In placing the amount of security at the above figure, we desire to state that we remain of the opinion, expressed in our report of February 13th, 1892, that the system of supply provided by The East Jersey Water Company is not sufficient and that the present work is not fully completed, and inasmuch as the pipe line has not been tested, and that the special high service has not been connected, we think that the city at the present time should be fully protected against all possible deficiencies of the work.

After the system of pipes is tested and found satisfactory the amount of security could be safely reduced to the sum of $2,000,000 provided in the contract.

In this connection, it may not be out of place to state that the decision of your Engineers as to the sufficiency of the work at the time that the full payment is expected to be made, must be based on continuous observations of the capacity of the system, we would consequently recommend that records as to the rain-fall, the flow of the streams, and the flowing capacity of the pipes, be kept separately under your direction.

Yours respectfully,

(Signed), A. FTELEY,

Consulting Engineer.

CHAS. E. A. JACOBSEN,

Civil Engineer.

On the first day of August, an agreement was reached between the city authorities and The East Jersey Water Company, by which the latter received $3,500,000 in bonds, while $2,500,000 (including the $2,000,000, which, according to the contract, were to be held in escrow until 1900), were to be retained as security for the proper fulfillment of the contract for the new water supply. The $2,000,000 in excess of the amount stated in the Engineer's report were

added as security for water rights, which at that time had not been purchased or condemed, and for which proceedings are now in progress. Two documents were signed by both parties, one being a subsequent contract covering the $2,000,000 referred to, and the other an agreement and bond relating to the remaining $500,000, of which the following is a copy:

KNOW ALL MEN BY THESE PRESENTS, that THE EAST JERSEY WATER COMPANY, a corporation organized under the laws of the State of New Jersey, is held and firmly bound unto the Mayor and Common Council of the City of Newark, in the sum of Five Hundred Thousand Dollars, lawful money of the United States of America, to be paid to the said Mayor and Common Council of the City of Newark, their certain attorney, successor or assigns, to which payment well and truly to be made, the said The East Jersey Water Company binds itself, and its successors, firmly by these presents. Sealed with the seal of The said East Jersey Water Company, and dated the first day August, eighteen hundred and ninety-two.

WHEREAS, The East Jersey Water Company, by a deed of conveyance, bearing date the second day of May, eighteen hundred and ninety-two, has conveyed to the Mayor and Common Council of the City of Newark, the dams, reservoir sites, conduits, and all the works of every nature and description, built and constructed by The East Jersey Water Company, especially for the purpose of furnishing a supply of water for the City of Newark, with certain lands, water and water rights in said deed of conveyance, more fully set forth, with full covenants of ownership, warranty, and against encumbrances.

AND WHEREAS, The City of Newark has paid The East Jersey Water Company on account of the said conveyance, and in part execution on its part of a contract or agreement entered into to it with the said The East Jersey Water Company for the construction of the said water works, and the purchase of said lands, water and water rights, four million dollars, by delivering to it the bonds

of the said city in that amount, bearing date the second day of May, eighteen hundred and ninety-two.

And Whereas, by a certain other agreement, called an "escow" agreement, made between the said The East Jersey Water Company and the Mayor and Common Council of the City of Newark, bearing even date herewith, provision is made for the payment of the second or deferred payment of two million dollars, provided for in said contract, which payment is to be made upon the terms and conditions prescribed therein.

And Whereas, claim has been made on behalf of the Mayor and Common Council of the City of Newark that said works in certain respects do not meet the requirements of the contract made by said city with the said The East Jersey Water Company, and that certain things are necessary to perfect the title of the city to said lands, water and water rights so conveyed, and that among others, certain claims for damages remain unsettled.

And Whereas, the said The East Jersey Water Company as security for the performance of the conditions contained in this bond, has deposited with Trustee five hundred thousand dollars ($500,000) in bonds of the City of Newark, which bonds are to be held by said Trustee as collateral security for the faithful performance of the terms and conditions of this bond.

Now, Therefore, the condition of said obligation is such that if the said The East Jersey Water Company, its successors or assigns, shall and will perfect and complete the title of the said company and of its grantee, the said City of Newark, of, in and to the lands, water and water rights conveyed, or intended to be conveyed by the deed of conveyence made by the said The East Jersey Water Company to the said City of Newark, bearing even date herewith, and required by the contract, in pursuance of which the said conveyance is made with all their appurtenances, then, a sum equal to two-fifths of the total sum hereby secured shall be deemed to be paid and satisfied. And it is understood and agreed that when and so often as the said The

Amount brought forward	$3,237,132 90	$3,552,428 39
Low Service Reservoir, Seventh Avenue	304,039 20	
Branch Brook Reservoir, Seventh Avenue	54,294 15	
New Supply Survey	8,555 83	
Twelfth Ward Feeder	7,151 67	
Extra High Service	33,704 66	
High Service & Belleville Machinery, Fixtures &c	3,141 60	
Stable, Stock and Fixtures	5,424 00	
Office Furniture, Fixtures &c,	3,552 25	
Telephone Lines and Properties	1,200 00	
Hydrant Account	488 51	
Water Meter Account	21,105 55	
Bond and Mortgage	4,670 00	
Distributing Main, No. 2	63,612 00	
High Service Fuel Account	12,280 41	
do Engine Stores	1,342 97	
do Engineers' and Firemen's Wages	9,750 08	
Belleville Fuel Account	14,959 72	
do Engine Stores	1,116 96	
do Engineers' and Firemens' Wages	18,120 47	
Expense Account	13,739 75	
Salaries	15,574 96	
Inspection	11,796 00	
Engineering	4,636 26	
Interest—Coupons	228,400 00	
" Registered	50,105 00	
Insurance	332 00	
Interest—General Account	133 04	
Maintenance & Repairs, Telephone Lines, &c	3 65	
Maintenance—General Account	5,983 10	
do Reservoirs and Grounds	5,495 96	
do Pure Water	2,035 00	
New Water Supply	9.822 77	
Repairs, Street Mains	8,146 40	
do Hydrants	424 63	
do Real Estate, No 1	2,788 42	
do Real Estate, Tenements & General	93 37	
do Engineers' and Firemens' Dwellings	128 98	
do Keeper's House, Belleville	5 20	
do Drinking Fountains	6 95	
do Water Meters	311 80	
	$4,165,606 23	$3,552,428 39

Amount brought forward	$4,165,606 23	$3,552,428 39
Repairs, Low Service Reservoir	2,132 84	
do Belleville Pump House	61 85	
do High Service Pump House	32 88	
do Belleville Pumps, Boilers & General	772 18	
do HighServicePumps,Boilers& General	664 12	
do Tools	714 94	
do Supply Main, No. 1	56 89	
do do " 2	41	
do Services	5 00	
Setting Meters	125 92	
Service Account		4,732 53
Plumbing Supplies	47 66	
Surplus and Deficiency Account		165,626 29
Loss and Gain		5,665 20
Water Rents, Income		505,594 80
Penalties, Fines, &c.		2,291 70
Rents, Real Estate		683 00
Plumbers' Drafts		210 00
Collection Account, Advanced Water Rents	32,136 90	
do Services	3,525 63	
do Fractional	776 28	
do Miscellaneous	20,908 53	
Sundry Personal Account	9,653 65	
	$4,237,221 91	$4,237,221 91

STATEMENT A.

CONSTRUCTION ACCOUNT.

BELLEVILLE:	
Pump House	$ 56,309 39
Engineers' and Firemen's Dwellings	22,696 52
River Wall, Dock and Baisins	266,112 99
Receiving Reservoir	133,645 05
Keeper's House	3,192 60
Driven Wells	10,598 76
Caisson Well	2,453 80
New Boilers	15,638 31
New Chimney	10,057 24
Boiler House Extension	2,387 76
Pumping Engine, No. 1	55,909 73
do " 2	55,591 95
do " 3	78,918 29
do " 4	42,607 54
NEWARK:	
High Service Engine House	27,847 44
do do Extension	5,417 70
New Boilers, Clifton Ave	6,349 82
High Service Pumping Engine, No. 1	21,407 40
do do " 2	21,630 22
do do " 3	19,874 81
High Service Reserve Pumps	12,609 26
High Service Reservoir	94,585 27
Low Service Reservoir	304,039 20
Branch Brook Reservoir	54,294 15
MAINS:	
Street Mains, General	1,380,159 46
Pump Main, No. 1	92,552 57
do " 2	47,353 54
Supply Main, No. 1	152,998 38
do " 2	81,643 96
Section "A," Supply Main, No. 2	49,998 90
Twelfth Ward Feeder	7,151 67
Extra High Service	33,704 66
Distributing Main, No. 2	63,612 00
Street Mains of 1892	21,049 40
	$3,254,369 74

STATEMENT B.

GENERAL STOCK AND PROPERTY.

Belleville Fuel Account and Stoves	$10,421 83
High Service do do	460 20
Street Mains, Stock and Material	4,557 79
General Supplies	225 10
New Supply Survey	8,555 83
Belleville and High Service Machinery, Stock and Fixtures	2,926 38
Stable, Stock and Fixtures	5,424 00
Office Furniture, Fixtures, &c	3,596 25
Telephone Lines, &c	1,200 00
Hydrant Account	1,134 20
Water Meter Account	21,105 55
Bond and Mortgage	4,670 00
Service Account	458 16
Real Estate, General	256,475 59
Insurance	162 13
	$321,373 01

STATEMENT C.

ACCOUNTS DUE THE BOARD.

Collection Account, Advance Water Rent	$32,136 90
" " Fractional	776 28
" " Special	417 46
" " Building	38 93
" " Measured	9,099 78
" " Arrears	11,352 36
" " Services	3,525 65
Sundry and Personal Accounts	9,653 63
	$67,000 99

STATEMENT D.

MAINTENANCE AND REPAIRS.

Maintenance, Telephone Lines	$	3 65
do General	5,983	10
do Reservoirs and Grounds	5,495	96
do Pure Water	2,035	00
do New Water Supply	9,822	77
Repairs, Street Mains	8,146	40
do Hydrants	424	63
do Real Estate, No. 1	2,788	42
do Real Estate, Tenements and General	93	37
do Engineers' and Firemen's Dwellings	128	98
do Keeper's House, Belleville	5	20
do Water Meters	311	86
do Drinking Fountains	6	95
do Low Service Reservoir	2,132	84
do Belleville Pump House	61	85
do High Service Pump House	32	88
do High Service Pumps, Boilers and General	664	12
do Tools	714	94
do Supply Main, No. 1	56	89
do Supply Main, No. 2		41
do Services	5	00
do Belleville Pumps, Boilers and General	772	18
do Setting Meters	125	92
do Plumbing Supplies	47	66
	$39,860	98

ASSETS AND LIABILITIES.

	ASSETS.	LIABILITIES.
Construction Account	$3,254,369 74	
General Stock and Property	321,373 01	
Anticipated Assets	67,000 99	
Coupon Trust Fund	35 00	
Cash	185,780 75	
Coupon Bond Account		$2 710,000 00
Registered Bond Account		822,000 00
Coupons Payable		35 00
Plumbers' Drafts		210 00
Loss and Gain.		296,314 69
	$3,828,559 69	$3 828,559 69

STATEMENT.

FUND FOR THE CONSTRUCTION OF A STORAGE RESERVOIR.

CASH.

	DR.	CR.
Balance, December 31, 1891	$67,893 12	
From Interest on Deposits	12,075 00	
From Interest on Investments	955 95	
Sale of Bond No. 76	20,052 60	
Disbursements for the year		$96,669 07
Balance in Banks, December 31, 1892		4,307 60
	$100,976 67	$100,976 67

TRIAL BALANCE.

Storage Reservoir Fund Account		$202,307 60
Bond Account	$198,000 00	
Cash	4,307 60	
	$202,307 60	$202,307 60

SECURITIES.

Registered Newark City Water Bond, No 9	$50,000 00
" " " " " No. 10	6,000 00
" " " " " No. 28	50,000 00
" " " " " No. 86	15,000 00
" " " " " No. 87	12,000 00
" " " " " No. 88	15,000 00
" " " " " No. 75	40,000 00
Newark City Improvement Bonds, Nos. 271 to 280, inclusive.	10,000 00
	$198,000 00

DETAILED RECEIPTS AND EXPENDITURES FROM JANUARY 1, 1892, TO JANUARY 1, 1893.

RECEIPTS

Balance on hand Jan. 1st, 1892..		$95,263 80	
Advance Water Rent Collection.	$360,806 59		
Fractional Water Rent Collection	6,343 01		
Miscellaneous Water Rent Collection	117,760 70		
Hose Water Rent Collection....	5,405 00		
Motor Water Rent Collection...	2,935 48		
Service Collection, Services to Curb	21,201 06		
Sales on Service Account.....	55 50		
Rents of Real Estate.....	683 00		
Penalties and Fines.....	2,291 70		
Sundry Personal Accounts.. ..	23,797 61		
East Jersey Water Co., Use of Pump Main No. 2.....	5,000 00		
Mortgages Payment of Interest.	42 30		
Sale of Old Iron.....	463 78		
Sale of Oil Barrels.....	12 60		
Proceeds of Temporary Loan...	40,000 00		
City of Newark, Appropriation Account of Street Water Mains	20,000 00		
		$606,798 33	
			$702,062 13

EXPENDITURES—CONSTRUCTION.

Labor, laying street mains, 1892.	$6,759 78		
Carting Pipe.....	30 00		
		$6,789 78	
STREET MAIN, STOCK & MATERIAL.			
Hardware.....	89 41		
Iron Pipe	14,015 92		
Pig Lead.....	2,601 00		
Castings....	2,347 53		
Oil.....	15 36		
Wood.....	47 25		
Lumber.....	243 27		
Gates	2,190 00		
Car Service.....	9 00		
Expense.....	2 50	21,561 24	
			$28,351 02

DETAILED RECEIPTS AND EXPENDITURES—CONTINUED.

Amount brought forward.....			$28,351 02
GENERAL SUPPLIES.			
Coke.....	22 20		
Hardware.....	17 00		
Oil.....	1 00		
Lumber.....	71 95		
Wedges.....	13 48		
		125 63	
GENERAL MAINTENANCE.			
Oil.....	6 75		
Weighing Pipe.....	1 20		
Freight.....	17 59		
Labor.....	4,765 55		
		4,791 09	
MAINTENANCE OF RESERVOIRS AND GROUNDS.			
Hardware.....	106 67		
Coal.....	24 35		
Oils, etc.....	61 16		
Plumbing.....	36 79		
Lumber.....	46 60		
Painting Sign.	3 50		
Mason Supplies.....	27 25		
Machine Work.....	31 55		
Expense.....	3 75		
Labor.....	5,154 34		
		5,494 95	
MAINTENANCE PURE WATER.			
Printing.....	472 65		
Professional Legal Expenses.....	623 95		
Expense of Inspectors.....	103 19		
Livery.....	14 00		
Expense.....	4 80		
Labor.....	816 41		
		2,035 00	
REPAIRS OF REAL ESTATE, TENEMENT AND GENERAL.			
Plumbing.....	12 25		
Drain Pipe.....	6 69		
Labor.....	74 45		
		93 37	
REPAIRS OF KEEPER'S HOUSE, BELLEVILLE.			
Plumbing.....	5 20	5 20	12 546 25
Amount forward.....			$40,897 27

DETAILED RECEIPTS AND EXPENDITURES—CONTINUED.

Amount brought forward			$40,897 27
REPAIRS, REAL ESTATE, NO. 1.			
Carpenter Work, Office	$203 87		
Painting and Papering	975 79		
Mason Work	333 09		
Propping Building	95 00		
Iron Beams	87 46		
Relaying Tile	4 75		
Plumbing	449 14		
Lumber	58 66		
Carting	13 00		
Mason Supplies	3 30		
Hardware	12 83		
Glass, Putty, etc	9 15		
Window Screens	63 65		
Blacksmith	145 06		
Labor	301 67	2,788 42	
REPAIRS, STREET MAINS.			
Candles	3 40		
Livery	7 00		
Plumbing	304 30		
Oil	2 80		
Hardware	5 51		
Wood	8 50		
Cab Hire	3 50		
Expense	24 25		
Labor	3,428 51	3,787 77	
REPAIRS, TOOLS.			
Hardware	83 63		
Blacksmith	228 20		
One, No. 2 Single Suction Pump and Fittings	44 10		
Two Wells' Lights	200 00		
Plumbing	24 23		
Rubber Boots	50 00		
Two Pavement Axes	6 50		
Two Pounders	6 00		
Furnace and Grate	1 00		
Set Plumber's Tools	8 86		
Machine Work	11 17		
Labor	28 75	721 44	
			7,297 63
Amount forward			$48,194 90

DETAILED RECEIPTS AND EXPENDITURES—CONTINUED.

Amount brought forward.....			$48,194 90
REPAIRS OF ENGINEERS' AND FIREMEN'S DWELLINGS.			
Plumbing.....	34 95		
		34 95	
REPAIRS HIGH SERVICE PUMP HOUSE.			
Plumbing.....	1 75		
Oil.....	4 50		
Labor.....	26 63		
		32 88	
REPAIR, BELLEVILLE PUMP HOUSE			
Oil.....	5 80		
Lumber.....	1 23		
Labor.....	54 82		
		61 85	
REPAIRS, LOW SERVICE RESERVOIR			
Mason Work.....	487 96		
Mason Supplies.....	208 30		
Inspector.....	90 00		
Lumber.....	38 71		
Repaving.....	150 00		
Expense.....	25		
Labor.....	1,157 62		
		2,132 84	
REPAIRS, BELLEVILLE PUMPS, BOILERS AND GENERAL.			
Mason Work.....	618 77		
Machine Work.....	36 63		
Boiler Repairs.....	31 39		
Mason Supplies.....	83 89		
Plumbing.....	1 50		
		772 18	
REPAIRS, HYDRANTS.			
Machine Work.....	86 78		
Lumber.....	15 76		
Fixtures.....	22 20		
Hardware.....	8 22		
Oil.....	17 87		
Expense.....	1 65		
Labor.....	558 41	710 89	
			3,745 59
Amount forward.....			$51,940 49

DETAILED RECEIPTS AND EXPENDITURES—CONTINUED.

Amount brought forward.....			$51,940 49
REPAIRS, HIGH SERVICE PUMPS, BOILERS AND GENERAL.			
Mason Work.....	95 93		
Mason Supplies.....	19 00		
Boiler Repairs.....	126 00		
Plumbing.....	3 60		
Machine Work.....	382 49		
Lumber.....	11 78		
Expressage.....	15 00		
Labor.....	10 32		
		664 12	
REPAIRS, METERS.			
Hardware.....	2 45		
Plumbing.....	68		
Repairing Meters.....	769 66		
Expense.....	54 60		
Labor.....	6 06		
		833 45	
REPAIRS, DRINKING FOUNTAINS.			
Plumbing.....	125 12		
Labor.....	27 57		
		152 69	
MAINTENANCE, TELEPHONE LINES AND GENERAL.			
Moving Telephones.....	3 65		
		3 65	
HIGH SERVICE FUEL ACCOUNT AND WAGES.			
Coal.....	11,678 66		
Wood.....	14 25		
Monthly and Weekly Wages....	9,750 08		
		21,442 99	
HIGH SERVICE ENGINE STORES.			
Hardware.....	198 43		
Oil.....	568 24		
Gas.....	340 34		
Machine Work.....	23		
Adjusting Scale.....	27 50		
Wood.....	4 75		
Ice.....	23 00	1,262 49	24,359 39
Amount forward.....			$76,299 88

DETAILED RECEIPTS AND EXPENDITURES—CONTINUED.

Amount brought forward.....			$76,299 88
SUPPLY MAIN, NO. 2.			
Hardware....	41		
Lumber	6 14		
		6 55	
NEW WATER SUPPLY.			
Contract Gate House at Belleville	1,418 17		
Professional Services..... ...	3,110 11		
Purchase of Land.....	75 00		
Livery.....	5 00		
Maps.....	72 50		
Hardware	94		
Analysis.....	269 80		
Expense.....	800 00		
Fidelity Title & Deposit Co.....	1,250 00		
Labor.....	2,821 25		
		9,822 77	
WATER METER ACCOUNT.			
Meters.....	12,228 42		
Expressage.....	37 50		
Hardware..	40		
Expense.....	83 66		
Labor.....	3 18		
		12,353 16	
BELLEVILLE FUEL ACCOUNT AND WAGES.			
Coal.....	8,531 80		
Stable Supplies.....	93 90		
Horse Shoeing.....	13 00		
Expense.....	55 18		
Labor.....	17,958 39		
		26,652 27	
BELLEVILLE ENGINE STORES.			
Hardware.....	163 22		
Gasoline.....	231 97		
Oils, &c.....	391 79		
Boiler Compound	90 90		
Repairs, Scales..... ..	26 00		
" Gas Machine.....	2 62		
Expense.....	7 78	914 28	
			49,749 03
Amount forward.....			$126,048 91

DETAILED RECEIPTS AND EXPENDITURES—CONTINUED.

Amount brought forward			$126,048 91
HYDRANT ACCOUNT.			
Hydrants.	$3,774 00		
Labor.....	7 51		
		3,781 51	
PLUMBING SUPPLIES.			
Oil.....	5 38		
Supplies.....	44 22		
Expense.....	25		
		49 85	
SETTING METERS.			
Hardware	21 66		
Plumbing.....	4 08		
Labor...	100 18		
		125 92	
ENGINEERING.			
Hardware.....	9 45		
Livery.....	25 00		
Machine Work.....	1 74		
Expense.....	65 71		
Supplies.....	202 85		
Labor, Monthly and Weekly Wages.....	4,331 51		
		4,636 26	
INTEREST, FUNDED DEBT.			
Amount of Coupon Interest Due 1892..... ...	228,400 00		
Amuont of Registered Interest Due 1892.....	50,105 00		
		278,505 00	
SALARIES.			
Office Salaries.....	15 574 96		
		15,574 96	
INSPECTION.			
Wages, Monthly and Weekly Wages	11,796 00		
		11,796 00	
MISCELLANEOUS ACCOUNTS.			
Time Loan Paid.....	40,000 00		
Interest, Time Loan.....	175 34		
Storage Reservoir Account.....	87 12		
Insurance.....	225 00		
Loss and Gain Water Rent Refunded.....	20 66	40,508 12	
			354,977 62
Amount forward			$481,026 53

DETAILED RECEIPTS AND EXPENDITURES—CONTINUED.

Amount brought forward.....			$481,026 53
EXPENSES.			
Signs.....	8 50		
Rubber Stamps.....	13 50		
Document Boxes.....	6 84		
One Buggy.....	100 00		
Repairs, Yale Lock.....	4 80		
Copies of Laws.....	30 25		
Badges and Seals.....	23 60		
Treatment of Horses.....	15 00		
Desks, Table, Cabinet, etc.....	1,126 75		
Awnings.....	70 00		
Directories.....	8 50		
Type Writers' Supplies.....	26 70		
Repairs, Safe Door.....	8 85		
Framing Certificates.....	17 50		
Machine Work.....	5 50		
Legislative Bills.....	20 00		
Stenographer.....	15 90		
Legal Expense.....	344 65		
Fire and Water Subscription....	8 00		
Mason Work.....	15 14		
Ice.....	26 00		
Candles, Soap, etc.....	10 25		
Repairs, Furniture.....	6 00		
Hardware.....	62 95		
Coal.....	146 80		
Stationery and Printing.....	2,326 12		
Gas.....	152 46		
Oil.....	13 95		
Livery.....	177 00		
Telegrams and Telephone Mes..	102 55		
Repairs, Vehicles.....	234 50		
Horse Shoeing.....	144 75		
Stable Supplies.....	1,207 52		
Repairs, Harness.....	153 10		
Advertising.....	963 80		
Expense.....	1,206 85		
Labor.....	4,928 47		
		13,733 05	
SERVICES.			
Plumbers' Drafts.....	$1,335 20		
Hardware.....	117 89		
Barber Asphalt Paving Co.....	11 20		
Lead Pipe.....	4,209 85		
Corporation and Curb Stops....	2 551 35		
Stand Pipes.....	1,758 25		
Machine Work.....	274 84		
Plumbing.....	25 03		
Use of Tapping Machine.....	96 00		
Contract, A. P. Smith.....	600 00		
Expense.....	11 28		
Labor.....	10.530 71	21,521 60	35,254 65
Total Expenditures.....			$516,281 18
Balance on hand January 1st, 1893.....			185,780 95
			$702 062 13

STATEMENT OF STREET MAINS LAID DURING THE YEAR ENDING DECEMBER 31ST, 1892.

DATE.	LOCATION.	NO. OF FEET.	COST.	TOTAL.
Apr. 1892	*South 18th Street, from 13th Ave. to City Line.*	994		
	84 6-inch pipe		$377 16	
	4 6 " Galvin stops		58 00	
	4 Stop boxes, complete		20 00	
	2 6x6 double branches		18 09	
	2 6x4 single branches		14 84	
	2 4-inch pipe		5 56	
	5 6-inch plugs		6 38	
	1100 pounds lead		55 00	
	Yarn and wood		5 00	
	Labor and cartage		266 09	
				$826 12
Apr. 1892	*Vanderpool Street, from Frelinghuysen to Sherman Aves.*	503		
	43 6-inch pipe		193 07	
	2 6-inch Galvin stops		28 00	
	2 Stop boxes, complete		10 00	
	3 repaired boxes		2 70	
	500 pounds lead		25 00	
	Yarn and wood		3 00	
	Labor and Carting		136 03	
				397 80
Apr. 1892	*Waydell Street, from Ferry Street to Passaic Avenue.*	613		
	52 6-inch pipe		233 48	
	1 6x6 pat. sleeve and stop		27 40	
	1 Stop box, complete		5 00	
	1 6x4 single branch		7 21	
	1 6-inch bevel hub		3 78	
	1 4-inch pipe		2 78	
	1 6-inch plug		1 05	
	640 pounds lead		32 00	
	Yarn and wood		3 00	
	Labor and Carting		124 87	
				440 57
Apr. 1892	*Morris Avenue, from New to Condit Streets.*	275		
	23 6-inch pipe		103 27	
	1 6-inch Galvin stop		14 50	
	1 Stop box, complete		5 00	
	2 6-inch bevel hubs		7 70	
	280 pounds lead		14 00	
	Yarn and wood		2 00	
	Labor and carting		79 87	
				226 34
	Amount forward			$1,890 83

STATEMENT OF STREET MAINS LAID—CONTINUED.

DATE.	LOCATION.	NO. OF FEET.	COST.	TOTAL.
	Amount brought forward...			$1,890 83
Apr. 1892	*Eighteenth Avenue, from Fairview Avenue to Hunterdon Street.*	295		
	25 6-inch pipe		112 25	
	1 6x6 double branch		8 55	
	1 6-inch sleeve		2 98	
	2 6-inch plugs		2 10	
	230 pounds lead		11 50	
	Yarn and coke		2 00	
	Labor and Carting		96 96	
				236 34
May 1892	*Bergen Street, from Avon Avenue to Waverly Avenue.*	319		
	27 6-inch pipe		121 23	
	1 6x4 single branch		7 35	
	1 4-inch pipe		2 78	
	1 6-inch plug		1 09	
	350 pounds lead		17 50	
	Yarn and wood		3 00	
	Labor and carting		87 08	
				240 03
May 1892	*Aqueduct Street, from Elwood Ave. to north of Grafton Avenue.*	1,698		
	144 6-inch pipe		646 56	
	5 6-inch Galvin stops		72 50	
	6 Stop boxes, complete		30 00	
	2 6x6 double branches		16 97	
	3 6x4 single branches		22 08	
	6 4-inch pipe		25 02	
	5 6-inch plug		6 30	
	1850 pounds lead		92 50	
	Yarn and wood		5 00	
	Labor and carting		409 32	
				1,326 25
June 1892	*Elizabeth Avenue, Peddie Street and Sherman Avenue Mains, Elizabeth Avenue from dead end, to Peddie Street, in Peddie Street, to Sherman Avenue, in Sherman Avenue to City Line.*	1,070		
	90 6-inch pipe		404 10	
	3 6x6 double branches		25 41	
	1 6 to 4 reducer		4 06	
	5 6-inch Galvin stops		72 50	
	1 4-inch pipe		2 78	
	3 Stop boxes, complete		15 00	
	4 6-inch plugs		4 20	
	1 6x4 single branch		7 56	
	1000 pounds lead		50 00	
	Yarn and wood		5 00	
	Labor and carting		237 45	
				828 06
	Amount forward			$4,521 51

STATEMENT OF STREET MAINS LAID—CONTINUED.

DATE.	LOCATION.	NO. OF FEET.	COST.	TOTAL.
	Amount brought forward....			$4,521 51
June 1892	*Parkhurst Street from Tichenor Avenue, east 274 feet.*	274		
	23 6 inch pipe.....		103 27	
	1 6x4 single branch.....		2 45	
	1 4-inch pipe.....		2 78	
	1 6 to 4 reducer.....		3 36	
	1 6-inch sleeve.....		2 90	
	1 6-inch plug.....		1 05	
	295 pounds lead.....		14 75	
	Yarn and wood.....		2 00	
	Labor and carting.....		66 84	
				199 40
June 1892	*Fifth Street from Bloomfield Ave. to 200 feet south of Second Avenue.*	1,025		
	87 6-inch pipe.....		390 63	
	3 6-inch Galvin stops.....		43 50	
	3 Stop boxes, complete.....		15 00	
	2 4-inch pipe		5 56	
	2 6x4 single branches.....		13 68	
	1 6x6 double branch.....		8 54	
	3 6-inch plugs.....		3 15	
	1150 pounds lead.....		57 50	
	Yarn and coke.....		3 00	
	Labor and carting.....		207 25	
				747 81
June 1892	*Miller Street, from dead end, west of Avenue "A" about 225 feet*	225		
	19 6 inch pipe.....		85 31	
	1 6x4 single branch.....		7 10	
	1 4-inch pipe.....		2 78	
	1 4-inch plug.....		1 00	
	200 pounds lead.....		10 00	
	Yarn and coke.....		2 00	
	Labor and carting.....		68 50	
				176 69
June 1892	*Tichenor Street, from Hermon to Dawson Street.*	435		
	37 6-inch pipe.....		166 13	
	1 6-inch Galvin stop.....		14 50	
	1 Stop box, complete.....		5 00	
	1 4-inch pipe.....		2 78	
	1 6 to 4 single branch.....		7 32	
	395 pounds lead.....		19 75	
	Yarn and coke.....		3 00	
	Labor and carting.....		94 46	
				312 94
	Amount forward.....			$5,958 35

STATEMENT OF STREET MAINS LAID—CONTINUED.

DATE.	LOCATION.	NO. OF FEET.	COST.	TOTAL.
	Amount brought forward....			$5,958 35
July 1892	*Fifth Avenue from Lake to Aqueduct Street.*	263		
	22 6-inch pipe.....		$98 78	
	1 6 inch Galvin stop.....		14 50	
	1 Stop box, complete.....		5 00	
	1 4-inch pipe.....		5 56	
	1 6x4 single branch.....		7 35	
	1 6x6 double branch.....		5 87	
	2 6x6 plugs.....		2 48	
	1 6x6 cap.....		88	
	350 pounds lead.....		17 50	
	Yarn and coke.....		2 00	
	Labor and carting.....		65 01	
				224 93
July 1892	*Gouverneur Street, from Ogden to Passaic Street.*	252		
	21 6-inch pipe.....		94 29	
	2 6-inch Galvin stops		29 00	
	2 Stop boxes, complete.....		10 00	
	1 4-inch pipe.....		2 78	
	1 6x4 single branch.....		7 18	
	1 6x6 double branch.....		8 57	
	1 6-inch sleeve.....		2 76	
	1 6-inch plug.....		1 37	
	300 pounds lead.....		15 00	
	Yarn and coke.....		2 00	
	Labor and carting		55 88	
				228 83
July 1892	*Bleecker Street, from Colden to Lock Street.*	561		
	43 6-inch pipe.....		193 07	
	49 feet 6-inch hub.....		18 13	
	2 6-inch Galvin stops.....		29 00	
	2 Stop boxes, complete.....		10 00	
	1 4-inch pipe.....		2 78	
	1 6x4 single branch.....		7 32	
	2 6 to 4 reducers.....		7 59	
	650 pounds lead.....		32 50	
	Yarn and coke.....		2 00	
	Labor and carting.....		173 15	
				475 54
	Amount forward.....			$6,887 65

STATEMENT OF STREET MAINS LAID—CONTINUED.

DATE.	LOCATION.	NO. OF FEET.	COST.	TOTAL.
	Amount brought forward....			$6,887 65
July 1892	*Nineteenth Street, from Springfield Avenue, south to City Line.*	1,102		
	93 6-inch pipe.....		417 57	
	3 6-inch Galvin stops.....		43 50	
	3 Stop boxes, complete.....		15 00	
	2 4-inch pipe.....		5 56	
	2 6x4 single branches.....		14 35	
	1 6x6 double branch.....		8 61	
	1 6x6 angle branch.....		9 94	
	1 6x4 double branch.....		8 68	
	1 6-inch bevel hub.....		3 57	
	1 6-inch sleeve.....		3 04	
	1250 pounds lead.....		62 50	
	Yarn and coke.....		5 00	
	Labor and carting.....		296 07	
				893 39
Aug. 1892	*Frelinghuysen Avenue, from Alpine to Clifton Streets.*	1,047		
	88 6-inch pipe.....		395 12	
	4 6-inch Galvin stops.....		58 00	
	4 Stop boxes, complete.....		20 00	
	2 4-inch pipe.....		5 56	
	2 6x4 single branches.....		14 56	
	4 6x6 double branches.....		33 53	
	1230 pounds lead.....		61 50	
	Yarn and coke.....		5 00	
	Labor and carting.....		197 93	
				791 20
Aug. 1892	*South Sixteenth Street, from South Orange Avenue, to a point about 415 feet south.*	415		
	35 6-inch pipe.....		157 15	
	1 6x6 single branch.....		4 21	
	1 6x4 single branch.....		4 21	
	1 6-inch Galvin stop		14 50	
	1 Stop box, complete.....		5 00	
	1 6-inch sleeve.....		2 80	
	1 6-inch plug.....		1 05	
	1 4-inch pipe.....		2 78	
	375 pounds lead.....		18 75	
	Yarn and coke		3 00	
	Labor and carting.....		108 83	
				322 28
	Amount forward.....			$8,894 52

STATEMENT OF STREET MAINS LAID—CONTINUED.

DATE.	LOCATION.	NO. OF FEET.	COST.	TOTAL.
	Amount brought forward....			$8,894 52
Sep. 1892	*Second Street, from Central Ave., to Dickerson Street.*	377		
	32 6-inch pipe		$143 68	
	1 6-inch Galvin stop		14 50	
	Stop box, complete		5 00	
	1 Repaired box		90	
	1 6x4 single branch		8 12	
	1 4-inch pipe		2 78	
	400 pounds lead		20 00	
	Yarn and coke		3 00	
	Labor and carting		115 18	
				313 16
Sep. 1892	*North 7th Street, from 4th Avenue, north about 319 feet.*	319		
	27 6-inch pipe		121 23	
	1 6 inch Galvin stop		14 50	
	1 Stop box, complete		5 00	
	1 4-inch pipe		2 78	
	1 6x4 single branch		7 46	
	375 pounds lead		18 75	
	Yarn and coke		3 00	
	Labor and carting		69 92	
				242 64
Sep. 1892	*Second Avenue, from Fifth to Sixth Streets.*	214		
	18 6-inch pipe		80 82	
	1 6-inch Galvin stop		14 50	
	1 Stop box, complete		5 00	
	1 4-inch pipe		2 78	
	1 6x4 single branch		7 35	
	195 pounds lead		9 75	
	Yarn and coke		3 00	
	Labor and carting		61 69	
				184 89
Sep. 1892	*Murray Street, from Austin Street to Tichenor Avenue.*	375		
	31 6-inch pipe		139 19	
	3 6-inch Galvin stops		43 50	
	3 Stop boxes, complete		15 00	
	2 6x6 double branches		17 53	
	2 6 to 4 reducers		7 91	
	1 6-inch plug		1 08	
	350 pounds lead		17 50	
	Yarn and coke		3 00	
	Labor and carting		86 63	
				331 34
	Amount forward			$9,966 55

STATEMENT OF STREET MAINS LAID—CONTINUED.

DATE.	LOCATION.	NO. OF FEET.	COST.	TOTAL.
	Amount brought forward....			$9,966 55
Sept. 1892	*Fifth Avenue, from Parker to Aqueduct Street.*	257		
	22 6-inch pipe...		98 78	
	1 6-inch Galvin stop.....		14 50	
	1 Stop box, complete...		5 00	
	200 pounds lead.....		10 00	
	Yarn and coke.....		3 00	
	Labor and carting...		89 63	
Sept 1892	*South Tenth Street, from between Ninth and Central Avenue to Central Avenue.*	388		220 91
	33 6-inch pipe		148 17	
	1 6x4 single branch.....		7 35	
	1 4-inch pipe.....		2 78	
	1 6-inch plug		1 08	
	375 pounds lead...		18 75	
	Yarn and coke		3 00	
	Labor and carting.....		97 07	
Sept. 1892	*Montclair Avenue, from Degraw Avenue to First Street.*	260		278 20
	22 6-inch pipe.....		98 78	
	1 6-inch Galvin stop.....		14 50	
	1 Stop box, complete.....		5 00	
	1 4-inch pipe.....		2 78	
	2 6x4 single branches.....		14 66	
	300 pounds lead.....		15 00	
	Yarn and coke.....		3 00	
	Labor and carting.....		77 66	
Sept. 1892	*First Street, from Montclair Avenue south 180 feet and north 205 feet.*	385		231 38
	32 6-inch pipe.....		143 68	
	2 6-inch Galvin stops.....		29 00	
	2 Stop boxes, complete...		10 00	
	2 4-inch pipe...		5 56	
	1 6x6 double branch...		8 40	
	2 6x4 single branches.....		15 01	
	2 6-inch plugs.....		2 13	
	450 pounds lead.....		22 50	
	Yarn and coke.....		3 00	
	Labor and carting.....		112 95	
Sept. 1892	*Adams Street, from East Kinney to Oliver Street.*	245		352 23
	21 12-inch pipe.....		227 03	
	1 12-inch sleeve.....		5 70	
	485 pounds lead.....		24 25	
	Yarn and coke....		5 00	
	Labor and carting.....		154 85	
				416 83
	Amount forward.....			$11,466 10

STATEMENT OF STREET MAINS LAID—CONTINUED.

DATE.	LOCATION.	NO. OF FEET.	COST.	TOTAL.
	Amount brought forward....			$11,466 10
Sept. 1892	*Thirteenth Avenue, from Richmond to Rutgers Street.*	509		
	39 6-inch pipe.....		$175 11	
	4 6-inch 90 degree bends.....		14 31	
	3 6-inch bevel hubs.....		10 50	
	8½ feet 6-inch hubs.....			
	10 feet 6-inch spigot.....		6 74	
	450 pounds lead.....		22 50	
	Yarn and coke.....		5 00	
	Labor and carting.....		157 06	
				391 22
Sept 1892	*Avon Avenue, from Belmont Avenue to Ridgewood Avenue, and in Ridgewood Avenue, from Avon to Madison Avenues.*	1,025		
	87 6-inch pipe.....		390 63	
	2 6x6-inch single branches.....		14 42	
	1 6x4-inch single branch.....		7 31	
	2 6-inch Galvin stops.....		29 00	
	2 Stop boxes, complete.....		10 00	
	1 4 inch pipe.....		2 78	
	1000 pounds lead.....		50 00	
	Yarn and coke.....		5 00	
	Labor and carting.....		228 82	
				737 96
Oct. 1892	*Mt. Prospect Avenue, from Verona Avenue to Sylvan Avenue.*	556		
	42 6-inch pipe.....		188 58	
	27½ feet 6 inch spigot.....		10 36	
	31 6-inch hubs.....		7 50	
	1 6-inch Galvin stop.....		14 50	
	1 Stop box, complete.....		5 00	
	1 4-inch pipe.....		2 78	
	1 6x4 single branch.....		7 00	
	650 pounds lead.....		32 50	
	Yarn and coke.....		3 00	
	Labor and carting.....		117 50	
				388 72
Oct. 1892	*Fredonia Avenue, from Highland Avenue to Ridge Street.*	500		
	43 6-inch pipe.....		193 07	
	1 6-inch Galvin stop.....		14 50	
	1 Stop box, complete.....		5 00	
	2 4 inch pipe.....		5 56	
	2 6x4 single branches.....		15 86	
	1 6x6 double branch.....		8 75	
	665 pounds lead.....		33 25	
	Yarn and coke.....		3 00	
	Labor and carting.....		108 88	
				387 87
	Amount forward.....			$13,371 87

STATEMENT OF STREET MAINS LAID—CONTINUED.

DATE.	LOCATION.	NO OF FEET.	COST.	
	Amount brought forward			$13,371 87
Oct. 1892	*Rose Street, from Broome Street to Stratford Place.*	258		
	22 6-inch pipe.....		$98 78	
	1 6-inch Galvin stop.....		14 50	
	1 Stop box, complete.....		5 00	
	1 6-inch sleeve.....		2 87	
	298 pounds lead.....		14 90	
	Yarn and coke.....		3 00	
	Labor and carting.....		77 56	
				216 61
Oct. 1892	*Gotthardt Street, from Hamburg Place, to New York Avenue.*	820		
	70 6-inch pipe.....		314 30	
	1 6x6 patent sleeve and stop...		26 60	
	1 Stop box, complete.....		5 00	
	1 4-inch pipe.....		2 78	
	1 6x4 single branch...		7 91	
	850 pounds lead.....		42 50	
	Yarn and coke...		5 00	
	Labor and carting.		168 25	
				572 34
Oct. 1892	*Vincent Street, from Horatio Street, south, about 217 feet.*	217		
	18 6-inch pipe.....		80 82	
	2 6-inch Galvin stops.....		29 00	
	2 Stop boxes, complete.....		10 00	
	1 6x4 single branch.....		7 88	
	1 6x6 double branch.....		8 93	
	1 4-inch pipe.....		2 78	
	240 pounds lead.....		12 00	
	Yarn and wood.....		3 00	
	Labor and carting		54 25	
				208 66
Oct. 1892	*Albert Avenue, from Esther to Joseph Streets.*	269		
	23 6-inch pipe		103 27	
	1 6-inch Galvin stop.....		14 50	
	1 Stop box, complete....		5 00	
	325 pounds lead....		16 25	
	Yarn and coke..... ..		3 00	
	Labor and carting		77 94	
				219 96
Oct. 1892	*Hudson Street, from Sussex Avenue to Dickerson Street.*	477		
	34 6-inch pipe.....		152 66	
	65 feet 6-inch hub and spigot pieces.....		24 05	
	6 6-inch double hubs.....		15 00	
	2 6-inch Galvin stops		29 00	
	2 Stop boxes, complete.....		10 00	
	1 6x4 single branch.....		7 35	
	1 6 to 4 reducer.....		3 99	
	675 pounds lead.....		33 75	
	Yarn and coke.....		5 00	
	Labor and carting.....		190 44	
	Amount forward.....			471 24
				$15,060 68

STATEMENT OF STREET MAINS LAID—CONTINUED.

DATE.	LOCATION.	NO. OF FEET	COST.	TOTAL.
	Amount brought forward....			$15,060 68
Oct 1892	*Fourteenth Ave., from Fairmount Avenue to Camden Street.*	280		
	24 6-inch pipe.....		$107 76	
	1 6-inch Galvin stop		14 50	
	1 Stop box, complete.....		5 00	
	325 pounds lead.....		16 25	
	Yarn and coke.....		3 00	
	Labor and Carting.....		83 93	230 44
Oct. 1892	*Jelliff Avenue, from 18th Avenue to Waverly Place.*	716		
	60 6-inch pipe.....		269 40	
	12 feet 6 inch hub.....		7 50	
	1 6-inch Galvin stop..... ..		14 50	
	1 Stop box, complete.....		5 00	
	1 4-inch pipe.....		2 78	
	1 6x4 single branch		7 35	
	745 pounds lead.....		37 25	
	Yarn and wood.....		5 00	
	Labor and carting....		183 83	532 61
Oct. 1892	*South 14th Street, from S. Orange to Sixteenth Avenues.*	1,944		
	159 6-inch pipe.....		713 91	
	6 6-inch hubs...		15 00	
	60 feet 6-inch spigot pieces.....		22 20	
	1 6x6 patent sleeve and stop...		26 60	
	1 Stop box, complete.....		5 00	
	4 6-inch Galvin stops.....		58 00	
	4 Stop boxes, complete.....		20 00	
	4 4-inch pipe.....		11 12	
	4 6x6 single branches.....		33 04	
	2 6x6 double branches.....		17 67	
	5 6-inch plugs.....		5 41	
	2500 pounds lead.....		125 00	
	Yarn and wood.....		5 00	
	Labor and carting.....		437 81	1,495 6
Nov. 1892	*South 18th Street, from dead end north of 12th Ave. to 11th Ave.*	624		
	53 6-inch pipe.....		237 97	
	2 4-inch pipe.....		5 56	
	2 6x4 single branches.....		14 42	
	1 6-inch plug....		1 05	
	625 pounds lead.....		31 25	
	Yarn and coke.....		3 00	
	Labor and carting.....		196 85	
				490 10
	Amount forward			$17,809 59

STATEMENT OF STREET MAINS LAID—CONTINUED.

DATE.	LOCATION.	NO. OF FEET.	COST.	TOTAL.
	Amount brought forward...			$17,809 59
Nov. 1892	*Summer Place, from Chester Avenue south 459 feet.*	459		
	39 6-inch pipe		$175 11	
	1 6-inch Galvin stop		14 50	
	1 Stop box, complete		5 00	
	1 4-inch pipe		2 78	
	1 6x4 single branch		7 14	
	1 6-inch plug		1 05	
	450 pounds lead		22 50	
	Yarn and coke		3 00	
	Labor and carting		159 90	
				390 98
Nov. 1892	*Woodside Avenue, from Elwood Avenue north 229 feet.*	229		
	19 6-inch pipe		85 31	
	1 30x6 pat. sleeve and stop (double).		101 08	
	1 Stop box, complete		5 00	
	1 6-inch Galvin stop		14 50	
	1 Stop box, complete		5 00	
	1 4-inch pipe		2 78	
	1 6x6 double branch		9 24	
	1 6x4 single branch		7 03	
	1 6-inch plug		1 05	
	425 pounds lead		21 25	
	Yarn and wood		3 00	
	Labor and carting		77 95	
				333 19
Nov. 1892	*North Canal Street, from Cherry to River Streets.*	736		
	62 6-inch pipe		278 38	
	1 24x6 pat. sleeve and stop		65 89	
	1 Stop box, complete		5 00	
	1 6-inch Galvin stop		14 50	
	1 Stop box, complete		5 00	
	1 4-inch pipe		2 78	
	2 6x4 single branch		14 35	
	1 6-inch bevel hub		3 50	
	1 6 to 4 reducer		3 85	
	900 pounds lead		45 00	
	Yarn and coke		5 00	
	Labor and carting		233 74	
				676 97
	Amount forward			$19,210 73

STATEMENT OF STREET MAINS LAID—CONTINUED.

DATE.	LOCATION.	NO. OF FEET.	COST.	TOTAL.
	Amount brought forward			$19,210 73
Nov. 1892	*North 6th Street, from Sussex Ave. to Dickerson Street.*	496		
	42 6-inch pipe....		$188 58	
	1 6x4 single branch..... ...		7 28	
	1 6-inch Galvin stop.....		14 50	
	1 Stop box, complete.		5 00	
	9 feet of six-inch hub & spigot		3 33	
	1 6 to 4 reducer.....		2 73	
	1 6-inch plug.....		1 05	
	650 pounds lead.....		32 50	
	Yarn and coke.....		3 00	
	Labor and carting		133 25	
				391 22
Dec. 1892	*Lake Street, from Fifth Avenue north of 4th Avenue 550 feet.*	1,494		
	127 6-inch pipe.....		570 23	
	3 6-inch Galvin stops.....		43 50	
	3 Stop boxes, complete.....		15 00	
	2 6x6 double branches		18 93	
	2 6x4 single branches.....		14 49	
	2 4-inch pipe.....		5 56	
	1 6-inch sleeve.....		2 87	
	5 6-inch plugs.....		5 25	
	1620 pounds lead.....		81 00	
	Yarn and wood....		5 00	
	Labor and carting.....		352 34	
				1,114 17
Dec. 1892	*Westcott Street, from Ferry to Paterson Streets.*	391		
	33 6-inch pipe...		148 17	
	1 6x6 patent sleeve and stop..		26 60	
	1 6x4 single branch..... ..		7 17	
	1 4-inch pipe.....		2 78	
	1 6-inch bevel hub.....		3 81	
	1 6-inch plug.....		1 19	
	595 pounds lead....		29 75	
	Yarn and coke.....		3 00	
	Labor and carting.....		110 81	
				333 28
				$21,049 40

REPAIRS OF STREET MAINS.

Jan. 1892.—Repairing break on 4-inch main at South Canal Street, and Railroad Place.			
1 4-inch sleeve		$1 79	
4 feet 4-inch hub		1 04	
35 pounds lead		1 75	
Yarn and wood		1 00—	$5 58
" —Putting in new 6-inch stop on Sussex Avenue, at the canal.			
1 6-inch Galvin stop		14 50	
1 Stop box, frame and cover		5 00	
1 6-inch sleeve		2 94	
2½ feet 6-inch spigot		85	
50 pounds lead		2 50	
Yarn and wood		1 00—	26 79
Feb. 1892.—Repairing break on 6-inch main on Broad Street, between South and Parkhurst Streets.			
1 6-inch sleeve		2 98	
6 feet 6-inch hub		2 04	
40 pounds lead		2 00	
Yarn and wood		1 00—	8 02
Mar. 1892.—Repairing break on 4-inch main on Passaic Avenue, east of Jackson Alley			
2 4-inch sleeves		3 64	
6 feet 4-inch hub		1 50	
6 feet 4-inch Galvin stops		22 00	
40 pounds lead		2 00	
Yarn and wood		1 00—	30 14
" —Putting in new Stop in place of old Stop, at Somerset and Spruce Streets.			
1 6-inch Galvin stop		14 50	
1 6-inch sleeve		3 15	
3 feet 6-inch spigot		1 02	
35 pounds lead		1 75	
Yarn and wood		1 00—	21 42
April 1892.—Repairing break on 4-inch main at Boyden and Orange Streets.			
1 4-inch sleeve		1 75	
9 feet 4-inch spigot		2 16	
35 pounds lead		1 75	
Yarn and wood		1 00—	6 66
			$98 61

Amount brought forward		$98 61

April 1892.—Relaying 6-inch main in Washington Place, from Broad to Washington Streets.

45 6-inch pipe	202 05	
1 24x6 inch sleeve and stop	65 86	
3 6-inch bevel hubs	12 00	
2 6-inch bevel hubs	7 91	
1 6-inch sleeve	3 08	
1 6x6 single branch	7 66	
1 6-inch plug	1 05	
2 6-inch Galvin stops	29 00	
3 6-inch Stop boxes, complete	15 00	
2 6-inch ⅛ bends	8 29	
8 ⅝ inch corporation stops	5 20	
3 1-inch corporation stops	5 55	
77 pounds lead pipe, ⅝ inch	4 62	
37 pounds lead pipe, 1 inch	2 22	
820 pounds lead	41 00	
Yarn and coke	3 00—	413 49

May 1892—Repairing break on 4 inch branch pipe at High and Mercer Streets.

1 6x4 single branch	7 32	
1 6-inch sleeve	2 80	
2 foot 4-inch spigot	48	
1 4-inch pipe	2 78	
1 4-inch stop (Galvin)	9 00	
1 4-inch Galvin stop box	3 00	
60 pounds lead	3 00	
Yarn and wood	1 00—	29 38

" Repairing break on 6-inch main at Ferry and Union Streets

1 6-inch sleeve	2 90	
3 foot 6-inch hub	1 11	
40 pounds lead	2 00	
Yarn and wood	1 00—	7 01

" Relaying 6-inch main in James Street, from Washington to Burnett Streets.

92 6-inch pipe	413 00	
4 6x4 inch single branches	29 54	
1 4x4 inch single branch	4 23	
3 4-inch pipe	8 34—	455 11
		$548 49

Amount brought forward			$548 49
May 1892.—4 6-inch Galvin stops	58 00		
4 6-inch Stop boxes, complete	20 00		
3 4-inch sleeves	5 32		
1 6 to 4-inch reducer	4 13		
2 4-inch bevel hubs	4 23		
6 feet 4-inch spigot	2 23		
1 6x3 inch single branch	6 58		
1 3-inch stop	9 00		
1 3-inch sleeve	1 43		
6 feet 3-inch spigot	1 26		
50 ⅝ inch corporation stops	32 50		
108 pounds ⅝ inch lead pipe	5 40		
1300 pounds lead	65 00		
Yarn and wood	5 00—		675 91
June 1892.—Repairing break on 4-inch main at William and Arlington Streets.			
1 4-inch sleeve	1 86		
3 feet 4-inch hub	72		
30 pounds lead	1 50		
Yarn and wood	50—		4 58
Relaying 6-inch main in Tichenor Street, from Broad Street to N. J. R. R. Avenue.			
76 6-inch pipe	341 24		
2 6-inch Galvin stops	29 00		
2 6-inch Stop boxes, complete	10 00		
4 4-inch pipe	11 12		
3 6x4 inch single branches	21 91		
1 6x6 inch single branch	7 66		
1 6x6 inch double branch	8 40		
2 6 to 4-inch reducers	7 63		
1 6-inch sleeve	2 91		
32 ⅝ inch corporation stops	20 80		
56 pounds ⅝ inch lead pipe	3 36		
995 pounds lead	49 75		
Yarn and wood	2 00—		515 78
July 1892.—Repairing break on Division Street, near Spring Street.			
1 4-inch pipe	2 78		
1 4-inch sleeve	1 68		
40 pounds lead	2 00		
Yarn and wood	1 00—		7 46
			$1,751 50

Amount brought forward			$1,751 50
Aug. 1892.—Repairing break on 2-inch main between Halsey and Washington Streets.			
4 feet 4-inch spigot		50	
1 2-inch sleeve		53	
25 pounds lead		1 25	
Yarn and wood		50—	2 78
" Relaying 6-inch for 4-inch main in Park Place, from Centre to Broad Streets.			
97 6-inch pipe	435 53		
4 6-inch Galvin stops	58 00		
4 6-inch Stop boxes, complete	20 00		
3 4-inch Galvin stops	27 00		
3 4-inch Stop boxes	11 00		
5 4-inch pipe	13 90		
1 6x6 single branch	6 93		
4 6x4 inch single branches	29 08		
2 6 to 4 inch reducers	5 70		
1 4x4 inch single branch	2 91		
1 4 inch beveled hub	1 80		
2 6-inch beveled hubs	7 21		
1 6-inch ¼ bend	3 50		
1 10x6 inch pat. sleeve and stop	34 20		
4 1-inch corporation stops	7 40		
19 ⅝ inch corporation stops	12 35		
264 pounds lead pipe, ⅝ inch 204 pounds lead pipe, 1-inch	23 17		
1530 pounds lead	76 50		
Yarn and wood	5 00—		781 18
" Relaying 6-inch main in Pennington St., from Orchard to Mulberry Streets.			
39 6-inch pipe	175 11		
1 6-inch Galvin stop	14 50		
2 6-inch Stop boxes, complete	10 00		
22 ⅝ inch corporation stops	14 30		
84 pounds ⅝ inch lead pipe	4 15		
450 pounds lead	22 50		
Yarn and wood	3 00—		243 56
			$2,779 02

Amount brought forward		$2,779 02

Aug. 1892.—Relaying 6-inch main in Thomas Street, from Broad to Orchard Streets.

42 6-inch pipe	188 88	
2 6-inch Galvin stops	29 00	
2 6-inch Stop boxes, complete	10 00	
1 4-inch Galvin Stop	9 00	
1 4-inch Galvin stop box	3 00	
3 6x4 inch single branches	21 84	
1 6 to 4-inch reducer	4 06	
1 4-inch sleeve	1 75	
1 4-inch pipe	2 78	
15 feet 4-inch hub	3 60	
6 feet 6-inch hub	2 22	
17 ⅝ inch corporation stops	11 05	
1 1-inch corporation stop	1 85	
93 pounds ⅝ and 1-inch lead pipe	4 60	
650 pounds lead	32 50	
Yarn and wood	5 00—	331 13

Sept. 1892.—Relaying 6-inch main in Orchard Street, from E. Kinney to Chestnut Street.

40 6-inch pipe	199 60	
4 6-inch Galvin Stops	58 00	
4 6-inch Stop boxes, complete	20 00	
2 6x4 inch single branches	14 63	
1 6x6 double branch	8 63	
2 6 to 4-inch reducers	5 53	
1 4-inch pipe	8 13	
1 4-inch Galvin stop	9 00	
1 4-inch Galvin Stop box	3 00	
3 6-inch sleeves	8 68	
1 4-inch sleeve	1 75	
21 ⅝ inch taps	13 65	
47 pounds ⅝ inch lead pipe	2 82	
675 pounds lead	33 75	
Yarn and wood	5 00—	392 22

Oct. 1892—Repairing break on 4-inch main in Norfolk and Academy Streets.

1 4-inch sleeve	1 89	
3 feet 4-inch hub	72	
35 pounds lead	1 75	
Yarn and wood	50—	4 86
		$3,507 23

Amount brought forward			$3,507 23
Oct. 1892—Putting in two 4-inch Galvin stop at Nassau and Boyden Streets.			
2 4 inch Galvin stops	18 00		
2 Stop boxes, complete	10 00		
2½ feet 4-inch hub	60		
35 pounds lead	1 75		
Yarn and wood	50—		30 85
" —Repaired 4-inch main in West Park Street, near Halsey Street.			
1 4-inch sleeve	1 79		
4 feet 4 inch hub	72		
25 pounds lead	1 25		
Yarn and wood	50—		4 26
" —Relaying 4 inch main in Boyden Street, from Orange Street about 300 feet south			
25 4-inch pipe	69 50		
1 4-inch Galvin stop	9 00		
1 Stop box, complete	5 00		
283 pounds lead	14 15		
12 ⅝ corporation stops	7 80		—105 45
Nov. 1892—Relaying 6-inch in place of 4-inch main, Hill Street, from Broad to Washington Street.			
64 6-inch pipe	287 36		
1 24x6 inch pat. sleeve and stop	65 87		
1 Stop box, complete	5 00		
3 6-inch Galvin stops	43 50		
3 Stop boxes, complete	15 00		
3 6 to 4 reducers	11 76		
1 6x4 single branch	7 00		
1 4-inch pipe	2 78		
24 ⅝ inch corporation stops	15 60		
2 1-inch corporation stops	3 70		
2 6x2 pat. sleeve stops	32 97		
5½ feet 2-inch galvanized pipe	1 70		
1000 pounds lead	50 00		
Yarn and wood	5 00—		547 24
" —Repairing break on 3-inch main in Bleecker Street, between Washington and Halsey Streets.			
1 3-inch sleeve	1 33		
3 feet 3-inch hub	60		
35 pounds lead	1 75		
Yarn and wood	50—		4 18
			$4,199 21

RENEWED STOP BOXES.

Amount brought forward.....			$4,199 21
Feb. 1892.—Camden and Cabinet Streets, 1 6-inch. ..	90		
Camden and 13th Avenue, 1 6-inch.....	90		1 80
Mar. 1892.—Somerset and Spruce Streets, 1 6-inch....	90		90
April 1892.—Plane and Academy Streets, 1 6-inch.....	90		
Washington Street and Washington Place. 1 6-inch.....	90		1 80
May 1892.—Orange and Boyden Streets, 1 6-inch.....	90		
Eighth Avenue and Boyden Street, 1 6-inch	90		
State and Boyden Streets, 1 6-inch.....	90		
Warren and Colden Streets, 1 6 inch.....	90		
South Canal and Park Place, 1 6-inch.....	90		
South Canal and Mulberry Streets, 1 6-inch	90		
Colden and New Streets, 1 6-inch.....	90		
Market and Plane Streets, 1 6 inch.....	90		
Colden and Bleecker Streets, 1 6-inch.....	90		
Colden Street and Sussex Avenue, 1 6-inch	90—		9 00
June 1892.—Colden and Warren Streets, 1 6-inch.....	90		
Emmett and Broad Streets, 1 6-inch.....	90		
Emmett Street and Penn. Avenue, 1 6-inch	90		
Nesbit St., near Sussex Avenue, 1 6-inch..	90		
Plane St., south William Street, 1 6-inch..	90		
William St., east Plane Street, 1 6-inch...	90		
Arlington St., south William St., 1 6-inch.	90		
Orange St., east Broad Street, 1 6-inch....	90		
Burnett St., south Orange Street, 1 6-inch.	90		
Pacific St., south Walnut Street, 1 6-inch..	90		
Pacific St., south Warwick Street., 1 6-inch	90		
Pacific St., north Walnut Street, 1 6-inch .	90		
Sheffield St., north Sussex Avenue, 1 6-inch	90		
Newark St., north Warren Street, 1 6-inch.	90		
Nesbit St., south Orange St., 1 6-inch.....	90—		13 50
July 1892.—Oliver and McWhorter Streets, 1 6-inch...	90		
Oliver near Pacific Street, 1 6-inch.....	90		
Eighth Avenue and Broad Street, 1 6-inch.	90		
N. Y. Ave., west side of Pacific 1 6-inch ..	90		
Washington Place and Washington Street, 1 6-inch.....	90		
Ogden and Orange Streets, 2 6-inch... ...	180		
Essex St., north side James St., 1 6-inch..	90		
Eagles St., north side James St., 1 6-inch..	90		
Wilsey St., north side Bank St., 1 6-inch..	90		
Nesbit St., north side Orange St , 1 6 inch.	90		
Pacific and Elm Streets, 1 6-inch...	90		
Wilsey St., north Academy St., 1 6-inch...	90		
Academy St., east Wilsey St., 1 6-inch....	90—		
		$12 60	$4,226 21

Amount brought forward.....	12 60	4,226	21
July 1892.—Passaic and Clark Streets 1 6-inch.....	90		
Lemon and Nesbit Streets, 1 6-inch... ...	90		
Court Street and Belmont Avenne, 1 6-inch	90		
Warren Street north Wilsey Street, 1 6-inch	90		
Wilsey Street, west Warren Street, 1 6-inch	90		
Wilsey Street, east Warren Street, 1 6-inch	90		
Warwick Street, east Pacific Street, 1 6-inch	90		
Nichols Street, east Pacific Street, 1 6-inch	90		
N. J. R. R. Ave., east Walnut Street 1 6-inch	90		
Howard Street, east Bank Street, 1 6-inch	90		
McWhorter Street, east Walnut St., 1 6-inch	90		
E. Kinney Street, east Pacific Street, 1 6-inch	90		
Grant Street, east Broad Street, 1 6-inch..	90		
Grant Street, west Spring Street, 1 6-inch..	90		
Oriental St., and Mt. Pleasant Ave., 1 6-inch	90		
Quitman Street, north Spruce Street, 1 6-inch	90		
Quitman Street, south Spruce St., 1 6-inch	90		
Monmouth Street, north Spruce St., 1 6-inch	90		
Monmouth Street, south Spruce St., 1 6-inch	90		
Spruce Street, east Monmouth St., 1 6-inch	90		
Eighth Avenue, and Nesbit Street, 1 10-in..	10 00		
Adam and Walnut Streets, 1 6-inch.....	90		
Jefferson and Walnut Streets, 1 6-inch....	90		
Pacific and Walnut Streets, 1 6-inch.....	90		
East Kinney and Pacific Streets, 1 6-inch..	90		
McWhorter and Walnut Streets, 1 6-inch .	90—	45	10
Aug. 1892.—N. Y. Avenue, east Pacific Street, 1 6-inch	90		
Oliver Street, east Pacific Street, 1 6-inch.	90		
Mulberry Street, south River Street, 1 6-inch	90		
Harvey St. and Mt. Pleasant Ave., 1 6-inch	90		
Bruen and Elm Street, 1 6-inch.....	90		
Pacific and Chestnut Streets, 1 6-inch.....	60		
Spruce Street, east Barclay Street, 1 6-inch	90		
Spruce Street, west Barclay Street, 1 6-inch	90		
Washington Place, 1 6-inch.....	90		
Orange and First Streets, 1 6-inch.... ...	90		
Warren Street, east Plane Street, 1 6-inch.	90		
Plane Street, north Warren Street, 1 6-inch	90		
Plane Street, south Warren Street, 1 6-inch	90		
Barclay Street, north Spruce Street, 1 6-inch	90—	12	60
Sept. 1892—Broome and Spruce Street, 1 6-inch.....	90		
Bruce and Spruce Streets, 4 6-inch.....	3 60		
Belmont Avenue and Spruce Street, 1 6-inch	90		
Charlton Street, north Spruce Street, 1 6-inch	90		
Charlton St., south Spruce Street, 1 6-inch.	90		
Market and Beaver Street, 1 6-inch.....	90		
Thirteenth Ave. and Richmond St., 2 6-inch	1 80		
Thirteenth Ave., and Wallace St., 2 6 inch	1 80		
Thirteenth Ave., and Rutgers St., 2 6-inch	1 80		
Thirteenth Ave., and Newton St., 1 6-inch.	90		
	$14 40	$4,283	91

Amount brought forward.....		14 40	$4,283	91
Sep. 1892.—Fourth and Summer Avenues, 1 6-inch....		90		
Fourth Ave. and Garside Street, 1 6-inch..		90		
Littleton and S. Orange Aves., 1 10-inch..10		00		
Bruce St. and S. Orange Ave., 1 10-inch..10		00	36	20
Oct. 1892.—Van Buren and Glover Sts., 1 6-inch		90		
Clinton Ave. and Thomas St., 1 6-inch....		90		
Mt. Prospect and Fourth Aves., 1 6-inch..		90		
Bloomfield and Fourth Aves., 1 6-inch....		90		
Broad St. and Fourth Ave., 1 6-inch.....		90		
Nassau and Boyden Sts., 2 6-inch.....	1	80		
Van Buren and Lafayette Sts., 2 6-inch....	1	80—	8	10
Nov. 1892.—Clover and Polk Streets, 1 6-inch.....		90		
Penn. Ave. and Parkhurst St., 1 6-inch...		90		
Polk Street, 1 6-inch		90—	2	70
Dec. 1892.—Parkhurst and Brunswick Sts., 1 6-inch....		90		
Niagara and Bremen Sts., 1 6-inch.....		90		
Parkhurst St. and Clinton Ave., 1 6-inch..		90		
Parkhurst St. and Penn. Ave., 1 6-inch...		90		
Hamilton and Lawrence Streets, 1 6-inch..		90		
Newton St. and 13th Avenue, 1 6-inch ...		90		
Richmond St. and S. Orange Ave., 1 6-inch		90		
Beacon St. and S. Orange Ave., 1 6-inch..		90		
Newton St. and S. Orange Ave., 1 6-inch.		90		
Bruce St. and S. Orange Ave., 1 6-inch....		90		
Howard St. and S. Orange Ave., 1 6-inch.		90		
Plane and Market Streets, 1 6-inch.....		90		
Academy and High Streets, 1 6-inch.....		90		
Warren and Hudson Streets, 1 6-inch.....		90		
Warren and Newark Streets, 1 6-inch.....		90		
Warren and Lock Streets, 1 6-inch		90		
Warren and Searing Streets, 1 6-inch.. ..		90		
Warren and Searing Streets, 1 6-inch.....		90		
Warren and Arch Streets, 1 6-inch.....		90		
Warren and Plane Streets, 1 6-inch.....		90		
Hackett and Plane Streets, 1 6-inch.....		90—	18	90
			$4,349	81
Labor, Cartage, etc.....			3,796	59
			$8,146	40

SERVICES FROM JANUARY 1, 1892 TO JANUARY 1, 1893.

MONTHS.	SIZE.	New Services.	Services Renewed.	No. Taps only.	No. Taps & Boxes only.	No. Boxes only.	New Water Takers.	No. Feet of Pipe.	CHARGES.
January, 1892	⅝ inch	46	3		1	1	48	1,077	$ 764 94
February, "	"	57	3		..	2	59	1,231[2]	904 34
March, "	"	117	1		2	..	119	2,364[2]	1,784 00
April, "	"	141	6		2	3	146	3,140	2,217 00
May, "	"	155	1		..	1	156	3,124[2]	2,354 44
June, "	"	114	7		3	1	118	2,215[2]	1,830 40
July, "	"	82	..		1	5	88	1,551	1,252 00
August, "	"	148	7		..	2	150	3,021[2]	2,352 08
September, "	"	142	1	1	4	6	153	2,795[2]	2,212 15
October, "	"	141	..		2	3	146	3,026	2,173 87
November, "	"	104	4		1	4	109	2,303	1,650 44
December, "	"	63	4		2	..	65	1,413[2]	1,016 48
Totals		1310	37	1	18	28	1,357	27,263½	$20,512 14

SERVICE FROM JANUARY 1, 1892 TO JANUARY 1, 1893.

MONTHS.	SIZE.	New Services.	Services Renewed.	No. Taps only.	No. Taps & Boxes only.	No. Boxes only.	New Water Takers.	No. Feet of Pipe.	CHARGES.
January, 1892	1 inch.	2	2	..	..	..	2	101	$88 00
February, "	"	1	..	..	..	..	1	18	23 00
March, "	"	4	..	..	..	..	4	85[2]	92 00
April, "	"	8	..	..	1	..	9	201[2]	194 00
May, "	"	10	..	..	1	..	11	183	240 00
June, "	"	6	4	..	..	..	6	170	226 00
July, "	"	..	..	..	..	..	..	...	00
August, "	"	8	..	..	1	..	9	202	184 00
September, "	"	4	3	..	1	1	6	121[2]	172 00
October, "	"	1	..	..	..	..	1	22	23 00
November, "	"	4	..	..	2	..	6	65	115 00
December, "	"	2	..	..	..	..	2	42[2]	46 00
Totals		50	9		6	1	57	1,212	$1,403 00

RECAPITULATION.

SIZE.	New Services.	Services Renewed.	No. Taps only.	No. Taps & Boxes only.	No. Boxes only.	New Water Takers.	No Feet of Pipe.	CHARGES.
⅝ inch Services	1,310	37	1	18	28	1,357	27,263[2]	$20,512 14
1 " "	50	9	..	6	1	57	1,212	1,403 00
Totals	1,360	46	1	24	29	1,414	28,475[2]	$21,915 14

CONNECTIONS FROM JANUARY 1, 1892, TO JANUARY 1, 1893.

MONTHS.	½ INCH.	2 INCH.	3 INCH.	4 INCH.	6 INCH.	TOTAL.
January, 1892	..	2	..	1	..	3
February "	..	2	..	..	..	2
March "	..	1	..	..	..	1
April, "	..	5	..	..	..	5
May, "	..	1	1	..	..	2
June, "	..	3	..	..	..	3
July, "	..	2	..	..	..	2
August, "	..	1	..	1	..	2
September, "	..	1	2	..	1	4
October, "	..	4	..	..	..	4
November, "	1	1	..	2	..	4
December, "	..	..	..	2	..	2
Totals	1	23	3	6	1	34

NEW METERS SET FROM JANUARY 1, 1892, TO JANUARY 1, 1893.

MONTHS.	5/8 INCH.	3/4 INCH.	1 INCH.	1/2 INCH.	2 INCH.	3 INCH.	4 INCH.	6 INCH.	TOTAL.
January, 1892	1	..	5	..	1	..	1	..	8
February, "	..	..	2	..	3	..	..	..	5
March, "	3	..	..	..	2	1	..	..	6
April, "	43	6	21	..	11	..	..	..	81
May, "	54	6	22	..	10	1	..	..	93
June, "	41	7	28	2	9	2	..	1	90
July, "	10	..	7	..	5	..	..	..	22
August, "	29	5	16	1	5	1	1	..	58
September, "	11	1	7	..	2	2	..	..	23
October, "	16	1	12	1	3	2	..	..	35
November, "	10	1	3	2	2	..	..	..	18
December, "	9	1	4	3	2	..	2	..	21
Totals	227	28	127	9	55	9	4	1	460

INVENTORY NO. I.

STREET MAINS, STOCK AND MATERIAL.

IRON PIPE.

Three inch, 12 feet, at.	$	17½	$ 2 10
Four inch, 12 feet, at..		23	2 78
Six inch, 216 feet, at...		37	79 92
Eight inch, 24 feet, at..		68	16 32
Ten inch, 312 feet, at..		82	255 84
Twelve inch, 24 feet, at		91	21 84
Sixteen inch, 132 feet at	1	50	198 00
Twenty inch, 36 feet, at	2	17	78 12
Twenty-four inch, 132 ft	2	67	352 44
Thirty inch, 180 ft., at.	4	42	795 60

SLEEVES.

Two inch, 3 at.....		40.	$ 1 20
Three inch, 2, at.....	1	30	2 60
Four inch, 3, at.....	1	85	5 55
Six inch, 4, at.....	2	80	11 20
Eight inch, 5, at.....	3	65	7 30
Ten inch, 1, at.....	4	75	4 75
Twelve inch, 1, at....	5	70	5 70
Sixteen inch, 3, at.....	7	25	21 75
Twenty inch, 10, at....	8	25	82 50
Twenty-four inch, 2, at.	13	70	27 40
Thirty inch, 1, at.....	30	72	30 70

BENDS, 90 DEGREES.

Three inch, 3, at.....	1	10	$ 3 30
Four inch, 2, at.....	2	40	4 80
Sixteen inch, 1, at....	10	00	10 00

BENDS, 45 DEGREES.

Three inch, 4, at.....	1	10	$ 4 40
Six inch, 6, at.....	4	23	25 38

BENDS, 65 DEGREES.

Thirty-four inch, 3, at.	26	50	$ 79 50

DOUBLE BRANCHES.

Three by three, 4, at...	3	15	$ 12 60
Four by four, 4, at....	3	85	15 40
Eight by six, 1, at.....	10	50	10 50
Ten by six, 3, at.....	11	50	34 50
Ten by ten, 1, at.....	13	50	13 50
Sixteen by six, 3, at....	22	50	67 50

Amount forward $2,285 01

Amount brought forward..... $2,285 01

EXTENSION FLANGED HYDRANT PIPE.

Four inch, 2, at.....$2 50.....		$ 5 00

SINGLE BRANCHES.

Two by two, 2, at.....$1 50.....		$ 3 00
Three by three, 1, at.. 2 43.....		2 43
Three by six, 1, at.... 6 37.....		6 37
Four by two, 1, at..... 2 35.....		2 35
Four by three, 2, at... 2 80.....		5 60
Four by four, 1, at.... 3 15.....		3 15
Four by six, 1, at..... 7 31.....		7 31
Six by four, 1, at..... 7 31.....		7 31
Six by six, 3, at..... 7 66.....		22 98
Eight by six, 1, at..... 8 58.....		8 58
Ten by two, 1, at..... 8 58.....		8 58
Ten by four, 1, at..... 9 00.....		9 00
Ten by six, 1, at.....11 00.....		11 00
Ten by ten, 3, at.....12 95.....		38 85
Twelve by four, 1, at..15 00.....		15 00
Twelve by eight, 1, at.16 00.....		16 00
Sixteen by four, 1, at..23 00.....		23 00
Sixteen by six, 4, at...23 25.....		93 00
Twenty by four, 1, at..24 25.....		24 25
Twenty by twelve, 1, at 30 00.....		30 00
Twenty-four by ten, 2 at 40 00.....		80 00

REDUCERS.

Three to two, 4, at.....$ 95.....		$ 3 80
Four to three, 3, at.... 2 00.....		6 00
Six to four, 2, at..... 2 95.....		5 90
Eight to six, 5, at .... 9 00.....		45 00
Ten to six, 1, at..... 9 45.....		9 45
Ten to eight, 1, at.....10 00.....		10 00
Twenty to ten, 2, at...12 00.....		24 00
Twenty to sixteen, 1, at 14 50.....		14 50

CAPS.

Two inch, 2, at.....$ 25.....		$ 50
Three inch, 3, at..... 31.....		93
Four inch, 42, at..... 42.....		17 64
Six inch, 1, at. ..... 1 12.....		1 12
Ten inch, 1, at..... 2 00.....		2 00
Twelve inch, 2, at..... 3 00.....		6 00
Sixteen inch, 1, at..... 4 00.....		4 00
		$2,858 61

Amount brought forward			$2,858 61
Caps, continued, amount forward.			
Twenty inch, 1, at	$6 00	$ 6 00	
Twenty-four inch, 3, at	8 00	24 00	
Thirty inch, 2, at	10 80	21 60	
PLUGS.			
Three inch, 3, at	$ 25	$ 75	
Four inch, 56, at	40	22 40	
Six inch, 47, at	60	28 20	
Sixteen inch, 1, at	3 00	3 00	
Twenty inch, 1, at	5 00	5 00	
Twenty-four inch, 1, at	8 00	8 00	
Thirty inch, 1, at	10 00	10 00	
BEVELED HUBS.			
Three inch, 1, at	$1 75	$ 1 75	
Six inch, 2, at	3 92	7 84	
Ten inch, 2, at	9 00	18 00	
Twenty-four inch, 1, at	17 50	17 50	
STOP VALVES.			
Three inch, 5, at	$10 00	$ 50 00	
Four inch, (Galvin) 34, at	9 00	306 00	
Four inch, (Hewes & Phillips) 4 at	10 00	40 00	
Six inch, (Hewes & Phillips) 4, at	10 00	40 00	
Six inch, (Galvin) 29, at	14 50	420 50	
Ten inch, (Galvin) 2, at	22 50	45 00	
Ten inch, 5, at	10 00	50 00	
Twenty-four inch, (Galvin) 1, at		262 50	
A. P. SMITH'S PATENT SLEEVES.			
Four by two, 1, at	$3 25	$ 3 25	
Four by three, 4, at	3 50	14 00	
Six by two, 2, at	4 75	9 50	
Six by three 1, at	4 65	4 65	
Six by four, 4, at	5 00	20 00	
MISCELLANEOUS.			
Lead, 773 pounds, at	$ 4¾	$ 36 71	
Yarn, 70 pounds, at	9	6 30	
Twenty by twenty, "Y" branch, 1, at		61 00	
Sixteen by ten, "Y" branch, 1, at		23 40	
Sixteen by three angle branch, 1, at		20 00	
Six by six, angle branch, 2, at	9 85	19 70	
Sixteen by twenty-four flanged branch, 1, at		35 75	
Twenty-four inch curved pipe, 1, at		24 00	
Thirty inch curved pipe, 1, at		30 00	
Cross piece for twenty-four in. plug, 1, at		2 88	
			$4,557 79

INVENTORY NO. 2.

GENERAL SUPPLIES.

Meter boxes, (wood) 3, at	$8 00	$24 00
Meter box frame, 1, at		3 95
Meter box cover, 1, at		3 95
Wood Stop boxes, 26, at	90	23 40
Wood Stop box, 8 feet long, 1, at		1 50
No. 6 Morgan Stop box, 1, at		4 75
No 8 Morgan Stop box, 1, at		7 75
Galvin Stop boxes, (iron) 25, at	3 00	75 00

PAINTS AND OILS.

Venetian red, 6 pounds, at	$ 06	$ 36
Green paint, 10 pounds, at	06	60
Linseed oils, 2 gallons, at	50	1 00
Kerosene oil, 15 gallons, at	12	1 80

HARDWARE.

Ten penny nails, 50 pounds, at	4 cents	$ 2 00

LUMBER.

360 feet 6x6 spruce, at	2 cents	$ 7 20
236 feet 8x8 pine, at	2 cents	4 72
120 feet 3x12 spruce, at	2 cents	2 40
163 feet 10x15 pine, at	2 cents	3 26
80 feet 2x10 spruce, at	2 cents	1 60
80 feet 1¼ box lumber, at	2 cents	1 60
750 feet 12x12 spruce, at	2 cents	15 00
138 feet ⅞ pine, at	2 cents	2 76
1080 feet ¼ pine, at	2 cents	21 60
400 feet ½ cherry, at	2 cents	8 00
45 feet 1½ cherry, at	2 cents	90
200 feet 1½ oak, at	3 cents	6 00
		$225 10

INVENTORY NO. 3.

BELLEVILLE AND HIGH SERVICE INVENTORIES.

One portable forge	$ 30 00
One anvil	10 00
Rope, blocks and falls	5 00
Two wheelbarrow scales	120 00
Two coal buckets	160 00
Five iron barrows	100 00
One 3-horse engine	200 00
One drill press	150 00
One shaper	400 00
One lathe and appurtenances, including shafting and counter shafting	600 00
One bench vise	16 00
One carpenter's bench	5 00
Two chain blocks and falls	25 00
One table	3 00
Three forty-gallon cans	15 00
One desk	20 00
One clock	15 00
Two pair step ladders	5 00
One lawn mower	8 00
Coal hoisting	300 00
Apparatus, shed, etc.	139 62
Six chairs	11 10
One pipe vise	15 00
Iron barrows	26 00
Stove and fittings, weighmaster's box	16 66
One wardrobe	5 00
Table	3 00
Eight-day clock	20 00
One platform scale	200 00
One wheelbarrow scale	60 00
Two ladders	8 00
Four tool closets	12 00
One bench and vise	10 00
One pipe vise	15 00
Stove and fixtures at gate house	18 00
Andrew pump, No. 3	100 00
Pully for pump	35 00
Oil cabinets	45 00
	$2,926 38

INVENTORY NO. 4.

OFFICE INVENTORIES—FURNITURE AND FIXTURES ON HAND.

OFFICE.

One cash safe	$ 400 00
One book safe	150 00
Desks, fittings, fixtures and vault	818 00
One portable desk	55 00
Two portable desks	25 00
One automatic check perforator	37 50
One calendar clock	50 00
Eight stools	16 00
Six chairs	24 00
Six office chairs	20 00
One numbering stamp	50 00
One water cooler and stand	10 00
Umbrella stands	15 00
One portable desk, 8 feet long	38 00
One portable desk, 15 feet long	80 75
Floor coverings, cuspidores, mats, etc	157 00

BOARD MEETING ROOM, COMMISSIONERS' ROOM AND SUPERINTENDENT'S ROOM.

Nine desks	$ 266 00
Gas and electric light and general fittings	112 00
Six chairs	100 00
Three chairs	45 00
Two chairs	50 00
Nine chairs	45 00
One couch	50 00
One table	10 00
One table	40 00
Carpets, rugs, maps, cuspidores, etc	265 00
16 rugs	64 00

ENGINEERING AND INSPECTING DEPARTMENT.

Transits	$ 300 00
Level	75 00
Draughting instruments	50 00
Chain and rods	15 00
Maps, racks and fixtures	15 00
Map case	10 00
Three portable desks	54 00
Two tables	32 00
Three chairs	15 00
Three stools	9 00
One table	10 00
Six chairs	18 00
Total	$3,596 25

TELEPHONE LINES AND CALLS.

Balance on hand December 31, 1892	$1,200 00

UNIVERSITY OF ILLINOIS-URBANA
3 0112 119915830

INVENTORY NO. 5.

STABLE INVENTORY—STOCK AND PROPERTY ON HAND DECEMBER 31, 1892.

Two road horses	$ 600 00
One draught horse	300 00
One draught horse	250 00
Team draught horses	550 00
Two draught horses, Belleville	200 00
One phaeton	325 00
One side bar	125 00
One phaeton, Belleville	50 00
One depot wagon	200 00
Two business wagons	360 00
One truck wagon	235 00
One pipe truck	250 00
One light team harness	50 00
One heavy team harness	40 00
Two sets single harness	30 00
Two sets buggy harness	50 00
One cart and harness	50 00
Blankets, robes, etc	35 00
One box sleigh	25 00
Two light sleighs	25 00
One wagon jack	2 00
Forks and brooms	3 00
Pails	2 00
Brushes and combs	2 00
100 feet rubber hose	15 00
Feed bin	8 00
Patent stove	5 00
One pipe cutting machine	28 00
Two ⅝-inch tapping machines	200 00
One 1-inch tapping machine	150 00
One 2-inch tapping machine	75 00
One 3 to 4-inch tapping machine	175 00
One 6 to 12-inch tapping machine	300 00
Three derricks	75 00
Two sets blocks and ropes	30 00
Seven jack screws	31 00
Three worm blocks, 4,000 pounds	150 00
One grind stone and frame	10 00
Seventeen stop keys	34 00
Seven lanterns	6 00
Six pipe tongs	12 00
Eight pumps	40 00
One vise	5 00
Seven sledges	6 00
Two Well's lights	200 00
Two diaphragm pumps and suction hose	110 00
	$5,424 00